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THE UNIVERSITY OF ALBERTA

TIME ALLOCATION PRACTICES FOR SELECTED COURSES IN ALBERTA JUNIOR HIGH SCHOOLS

bу



A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE

OF MASTER OF EDUCATION

DEPARTMENT OF EDUCATIONAL ADMINISTRATION

EDMONTON, ALBERTA
FALL, 1971



THE UNIVERSITY OF ALBERTA FACULTY OF GRADUATE STUDIES

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies for acceptance, a thesis entitled "Time Allocation Practices for Selected Courses in Alberta Junior High Schools" submitted by Donald R. Barnett in partial fulfilment of the requirements for the degree of Master of Education.

Date .May .25, .1971 . .



ABSTRACT

The main purpose of this study was to examine the variations that existed in the time allocations for core subjects, the length of the school day, the incidence of study periods, and option time allocations. These results were compared with the findings of previous research to determine what changes have occurred since the 1969 revisions to the Alberta junior high school program.

The data were collected by a questionnaire which was distributed to the principals of the 300 sample schools. The schools represented by the responses were categorized by both size and type of organizational pattern. This enabled means for the various variables to be found for each category of school and allowed comparison between means to find significant differences.

Junior high schools and junior-senior high schools, as well as large schools, allocated the most time for the traditional academic subjects. Physical education, health and guidance were generally allocated the most time in small schools, medium schools and those schools with a senior high section.

The amount of time allocated for each of the core subjects shows a decrease as the grade increases. The mean time allocations for mathematics and science exceeded the suggested maximum. A majority of respondents met, or exceeded, the maximum time allocations suggested by the Department of Education in science,



mathematics and social studies.

As compared with the research conducted by Deutscher in 1964-65 the percentage reductions in time allocations for the core subjects were fairly uniform. The smallest reduction was 10.0 percent for science while the largest was 13.1 percent for language arts. The percentage reductions generally increased with the grade level.

The mean length of the instructional day for the 207 responding schools was 312.4 minutes. This was a decrease of 5.1 minutes from the previous study. Large schools, junior high schools and elementary-junior high schools were considerably below this mean.

Study periods were scheduled in 46.2 percent of the responding schools for a mean time of 82.9 minutes per week.

Small schools, medium schools and those schools with a senior high school section had the greatest incidence and the greatest mean time allocated to study periods.

The responding schools had a mean option time allocation of 458.2 minutes per week. This meant that 29.3 percent of the school week was spent in the study of options. Small and medium schools as well as elementary-junior-senior high schools allocated the most time for options.



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Chapter 1

INTRODUCTION

During the 1970 Canadian Education Association convention in Edmonton, J. R. Gass, Director of the Centre for Educational Research and Innovation, stated (1970:9) that educational efficiency could be improved by "more effective allocation of resources in relation to goals" and "more efficient ways of using resources within the existing framework." The main resources involved in the educational process are money, people and time. Financial and personnel resources are often allocated by central office personnel using few, if any, consultations with the principals involved. This leaves the allocation of available time as a major method by which the principal can attempt to improve the educational process in his school. Working with a limited amount of time the principal must balance time allocations so as to receive the optimum total return on this investment.

The organizational structures of junior high schools are based on many variables—the design of the building, the number and type of classrooms, the number and qualifications of teachers and the amount of time available to be distributed to the various subject areas. It is in the allocation of this available time that the principal is able to make adjustments to meet the needs of the individual school.

Gertrude Noar states (1961:310) that "curriculum is the



sum total of all the experiences that are provided by the school for its students." In this situation the principal's role is one of coordinating all the educational experiences provided for the student. The principal remains the one who is responsible for seeing that the philosophy of the school is reflected in the allocation of the available time.

In Alberta, time allocations are suggested by Department of Education regulations as outlined in the Junior High School Handbook. These regulations state a range of acceptable times for each subject and allow considerable adjustments of time to fit the individual situation. Times can be adjusted to adapt the program to the needs, interests and abilities of both the students and the teachers.

In 1969 a new junior high school program of studies was instituted in Alberta. The objective of this program, as stated by the Junior High School Handbook (1970:9), was to "give every pupil an opportunity to explore his own growing interests and abilities." This was done by expanding the number of options a student could choose to four from the previous two. In order to do this, time in other subject areas was reduced. The sizes of these reductions were based on the judgments of members of various curriculum committees as to how the available time should be distributed. By assigning priorities to the various core subjects time allocations which were felt to be appropriate were determined.



THE PROBLEM

Statement of the Problem

This study attempted to determine the nature of the variations that exist in time allocation practices for core subjects in Alberta junior high schools.

Sub-problems

- 1. What were the time allocations for each core subject in the junior high school grades for schools of various types and sizes?
- 2. What were the percentage changes in core time allocations when current allocations were compared with those found by Deutscher in 1964-65? How did these percentages compare with the theoretical percentage reductions calculated from the Junior High School Handbooks of 1962 and 1970?
- 3. What were the variations in the lengths of the school instructional day in various categories of schools? How did these results compare with Deutscher's findings?
- 4. To what extent are study periods scheduled in various categories of Alberta junior high schools and what amount of time is typically devoted to their use?
- 5. What were the amounts of time devoted to the study of options in various grades of the basic school categories?
- 6. What were the average time allocations for both 'A' options and 'B' options?



Significance of the Study

This study was basically descriptive in that it described practices as they actually existed in the schools. Comparison with Deutscher's research was carried out to determine how the institution of a major curriculum change has influenced time allocations. The degree to which departmental regulations were followed was also investigated.

Dougherty, Gorman and Phillips state (1957:29) that
"one of the most important and most perplexing problems in
constructing the daily program is that of determining the proper
amount of instructional time to devote to each of the areas of
curriculum." This research attempted to find some normative
guidelines to aid principals in arriving at more equitable
distributions of instructional time.

Time is precious in education and must be put to the best use possible. The original concern that all students, regardless of location, receive reasonably similar programs of study to ensure a basic standard of education is being questioned by those who feel education must be "tailor-made" to suit the individual pupil. Today's expanded option choices and suggested reduced times for core subjects assume a greater need for the educational program of the school to adjust to the needs and interests of the pupils. This study attempted to investigate if this philosophy was reflected in the time allocation practices in the Alberta junior high schools.



Limitations

- 1. The investigation was limited to the time allocations of one school year.
- 2. No attempts were made to judge the effects of time allocations on pupil achievement or teacher workload.
 - 3. No problems of scheduling were investigated.
- 4. Instructional time referred only to the total length of time a teacher was responsible for a class for the entire week. It did not deal with any variations in period lengths or spacing of class periods in the schedule.
- 5. This study was limited by any errors in the respondents' replies to the questionnaire.

Delimitations

For purposes of this study schools were classified in two distinct ways. The first method was by the type of grade pattern organization found in the school. This produced four types of schools:

Type I: Those schools offering instruction in grades seven, eight and nine $\underline{\text{or}}$ seven and eight $\underline{\text{or}}$ eight and nine only.

Type II: Those schools having at least ten teachers and offering instruction in grades seven to twelve $\underline{\text{or}}$ eight to twelve.

Type III: Those schools having at least ten teachers and offering instruction in grades one to eight or one to nine.

Type IV: Those schools having at least fifteen teachers



and offering instruction in grades one to eleven or one to twelve.

Very small schools were excluded by placing a restriction on the minimum number of teachers needed to be included in the study. This was done to ensure that time allocations reflected administrative choice rather than administrative necessity caused by size restrictions.

The second classification was by size according to the number of junior high school students enrolled in the school. The schools were classed as small if they enrolled up to one hundred thirty-five students. Medium schools enrolled from one hundred thirty-six to three hundred students while large schools enrolled more than three hundred students.

No private schools or schools with organizational patterns other than those previously mentioned were included in the study.

DEFINITION OF TERMS

Core Subjects - Subjects which are compulsory for all students. In Alberta mathematics, science, language arts, social studies, physical education and health are identified as core subjects by departmental regulations.

Options - Subjects which the student is allowed to select if staff and facilities permit. In Alberta the options are categorized as 'A' options (the cultural and fine arts) and 'B' options (academic electives).



<u>Subject Time Allocations</u> - The total number of minutes per week students are scheduled to receive instruction in a particular subject.

Range of Time Allocations - The variations in the amounts of time scheduled for various subjects per week.

<u>Study Periods</u> - Periods in which a class has no specific subject scheduled and can use their time as they see fit, under the supervision of a teacher.

<u>Length of School Day</u> - Number of minutes per day that instruction is scheduled. This is exclusive of lunch periods, class changes, recesses and registration time.

PLAN FOR THE BALANCE OF THE THESIS

This thesis will consist of eight chapters in addition to this first introductory chapter. Chapter two will consist of a review of the pertinent theoretical and research literature. Chapter three will outline the research methods and data analysis techniques used. Chapter four will consist of analyses of time allocations for core subjects and chapter five will compare these results with those found by Deutscher in 1964-65. Chapter six deals with lengths of the instructional day in Alberta junior high schools. Chapter seven deals with study periods in the sample schools. Chapter eight contains the analyses of time allocations for options and chapter nine will include a general summary as well as conclusions and recommendations.



Chapter 2

REVIEW OF THE LITERATURE

INTRODUCTION

The assignment of standardized time allocations for various subjects started in the early nineteen hundreds as a result of expanding post-secondary education. Students from various high schools experienced wide variations in the amount of time devoted to the various academic subjects and hence when entering university had an extreme range of experience and knowledge. In order to narrow this range Departments of Education instituted regulations governing the amount of time to be spent in various subjects.

From their beginnings in the senior high schools time allocation regulations have been extended to both elementary and junior high schools.

The Junior High School

The junior high school is more than a chance grouping of grades. It should have a program keyed to the growth and development of students in the early years of adolescence. It must continue to develop the basic skills and abilities from the elementary school and must expand the mental, physical and social experiences of the child. The junior high school must be a bridge, linking the elementary school with its common program and virtually no electives to the senior high with a wide variety of programs



and courses available to the student. Wright and Greer (1963:5) state: "in the junior high emphasis should be placed upon the attempt to help the pupil explore his own aptitudes." For these reasons the junior high school is a vital stage in the educational experiences of a student.

In spite of stated objectives for the junior high school Lounsbury and Douglass (1965:88) feel that:

except for areas of larger national concerns and interests, foreign languages, science and mathematics and counselling surprisingly little change has taken place in the American junior high school during the past decade.

Since the date that the previous comment was written new ideas have begun to influence the thinking and practice of junior high school administrators. Many of the changes are extremely slow in coming, particularly in the field of curriculum regulations where changes are influenced by current practices, recommendations from experimental schools and advice from administrative or curricular experts. All of these factors tend to focus on 'what is' and not necessarily on what should be.

Research evidence dealing with required curriculum is extremely meager. John Goodlad (1969:368) states that the "curriculum reform movement has been characterized by the refinement of curricula based on certain prior principles rather than by research."

The research herein reported attempted to look at one aspect of curricular change--time allocations.



THE CORE PROGRAM

The junior high school core program consists of the subjects which are compulsory in a particular governmental jurisdiction.

The Alberta core program for the junior high schools consists of language arts, mathematics, science, social studies, physical education and health. In addition group guidance may be included at the grade nine level at the discretion of the principal.

Conant in his basic work on the junior high school, written in 1960, suggested a core program should consist of English, social studies, mathematics and science each offered for one period a day for five days a week. Art, physical education, music and home economics or industrial arts would also be included in this program but for shorter amounts of time. Conant made no provisions for the inclusion of options in this proposed curriculum.

Van Til, Vars and Lounsbury (1967:175) propose a similar scheme with language arts, social studies and mathematics being studied five periods per week. Science would be studied for three or four periods per week and physical education and health for three periods per week. This allows time for the study of two options in addition to the core subjects.

United States Studies

Two studies have been carried out in the United States concerned with the subjects constituting a core curriculum in the junior high school. Fennell's study of 224 junior high schools is cited by Anderson and Van Dyke (1963:130) and a study of 1507



schools was reported by Greer and Wright (1963). The results of these studies are outlined in Table 1.

Percentage of U. S. A. Junior High Schools Including
Alberta Core Subjects in Their
Core Program

Table 1

Alberta	Fennell	Gree	Greer and Wright, 1963				
Core Subjects	1963	Grade Seven	Grade Eight	Grade Nine			
English	98.7	99.9	99.9	99.8			
Science	97.8	87.3	90.6	72.4			
Physical Education	97.3	89.9	89.7	87.3			
Mathematics	94.6	99.7	99.8	91.3			
Social Studies	76.3	98.7	98.9	73.1			
Health	74.1	57.4	53.4	41.4			

It can be seen from these figures that most Alberta core subjects were viewed as compulsory in the vast majority of the schools surveyed. The only exception is health. This would seem to indicate that the Alberta core program agrees with practices in American junior high schools. Fennell also found in his sample schools that some courses we classify as options were included as part of the core program. Music was compulsory in 90.6 percent of the surveyed schools, home economics in 85.7 percent, industrial arts in 83.9 percent and art in 81.7 percent.



Greer and Wright also found that the compulsory nature of the core program decreases as a student progresses through the junior high school. This would seem to be consistent with the role of the junior high school as a transition stage between the elementary and senior high schools.

Canada Survey

In his study Marconnit (1966) found that curriculum regulations showed extreme variations from state to state. In an attempt to view this research from a Canadian perspective the various provincial Departments of Education were contacted to determine exactly what courses constituted their current junior high school programs. All nine surveyed provinces responded. The reply from Quebec did not specify what subjects constituted a core program in that province. They did state however that their program was currently undergoing revisions to increase its flexibility. The core programs for all the provinces, except Quebec, are outlined in Table 2.

By analysis of Table 2 it can be seen that all of the provinces agree that language arts, mathematics, science, social studies and health should be included in a core program. All provinces except Prince Edward Island also include physical education in their core program and five include guidance. The remaining courses are included as core in less than five of the provinces. In both Newfoundland and Prince Edward Island social studies consists of three distinct courses in geography, history and civics.



The Junior High School Core Program in Nine Canadian Provinces

Core Subject	Alberta B. C.	В. С.	Sask.	Man	Ont,	N. B.	N. S.	Р. Е. І.	Nfld.
Language	*	*	*	*	*	삮	*	*	*
Mathematics	*	*	*	*	*	*	*	*	⊀
Science	-}<	水	*	*	*	÷<	*	*	*
Social Studies	*	*	*	*	*	×	-}<	*	*
Phys. Ed.	*	*	*	*	*	*	*		*
Health	*	*	*	*	*	*	*	*	*
Guidance	*	×	*	*	*				
Second Language		*	*		*	*			
Art			*			*			
Music			*			*			
Ind. Arts or Home Ec.		*	*						
Religious Instruction									*

* Core Subject



Some provinces include courses in their core program that Alberta classifies as options. Alberta is the only province that requires that four options be offered to students in each grade. The other provinces generally offer one or two options with the range of choice somewhat more restricted than is the case in Alberta.

TIME ALLOCATIONS

Even with agreement on what subjects to include in a basic core program the amount of time devoted to each subject is largely a matter of personal opinion. Smith, Stanley and Shores (1957) feel that the amount of time allotted to any subject is the result of practical experience and a judgment of the relative importance of the objectives to be met. Jarvis is critical of this method of making curricular decisions when he states (1963:64) that "for the most part time allotments have been based not on scientific inquiry but rather on existing practices in leading schools, opinions of leading educators, societal pressures or administrative expediency."

In spite of these difficulties he found that sixty-one out of sixty-four metropolitan districts surveyed did have time recommendations set for the various subject areas.

Marconnit found that of a total of 601 curriculum requirements in the various states of the United States only fifty-five dealt directly with the amount of time for study. The remainder of these regulations dealt with content or grade level of a particular course.



In a later study dealing specifically with time allocations for mathematics and science Jarvis once again criticized the lack of knowledge regarding appropriate time allocations. He states (1966:324) "research concerning the amount of time to be spent on teaching of arithmetic is scant and non-existent in science."

This lack of research largely accounts for the wide variations which exist in time allocations for various subjects. If there is little information on the most appropriate amounts of time to use for various subjects it is hardly surprising that curriculum committees base these decisions on their own judgments and past experiences.

Alberta Time Allocations

Junior high school time allocations in Alberta are largely expressed by the Department of Education as ranges of acceptable times. Since this study attempts to determine how the schools have adjusted time allocations to fit a new curriculum both the 1962 and 1970 suggested time allocations are outlined in Table 3.

The percentage reduction in mean time was calculated by using the means of each suggested range as a hypothetical time allocation. It can be seen that although all core subjects have lost time, mathematics and science seem to have been less harshly treated than other subjects.

In 1964-5 E. L. Deutscher analyzed the time allotments for the varous core subjects in the Alberta junior high schools as compared to departmental regulations. His findings (1965:43) are outlined in Table 4.

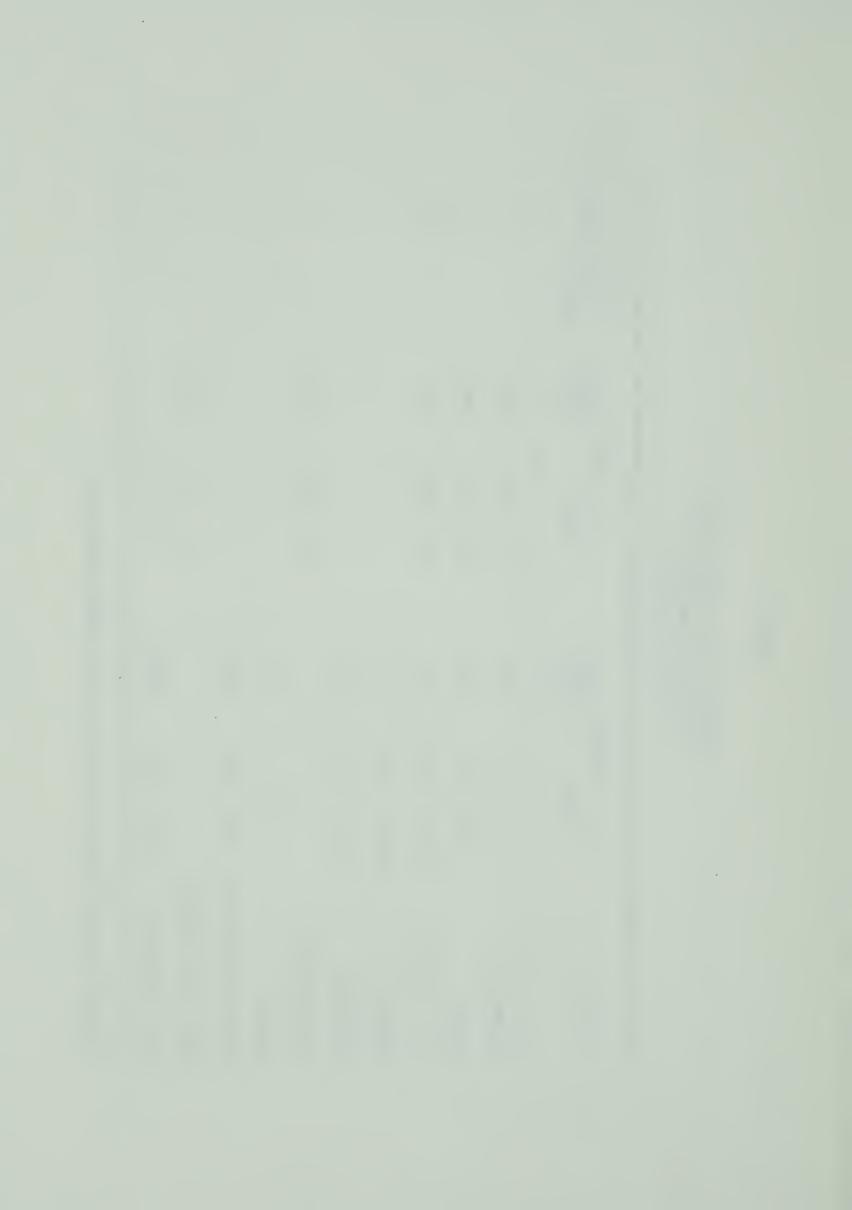


Table 3

Suggested Time Allocations in Minutes per Week for Various Subjects

	1962		1970	0	Percentage Reductions
Subject	Range	Range Mean	Range	Range Mean	in Mean Suggested Time
Mathematics	150 - 225	187.5	150 - 175	162.5	13
Science	150 - 225	187.5	150 - 175	162.5	13
Social Studies	187.5 - 262.5	225	150 - 200	175	22
Language	187.5 - 262.5	225			
Literature	112.5 - 150	131.5			
Language Arts			225 - 350	287.5	19
Health	7.5	75			
Physical Education	75 - 150	112.5			
Phys. Ed. & Health			120 - 175	147.5	21
Gr, IX Guidance	112.5 - 150	131,5	up to 75		

Adapted from the 1962 and 1970 Junior High School Handbooks

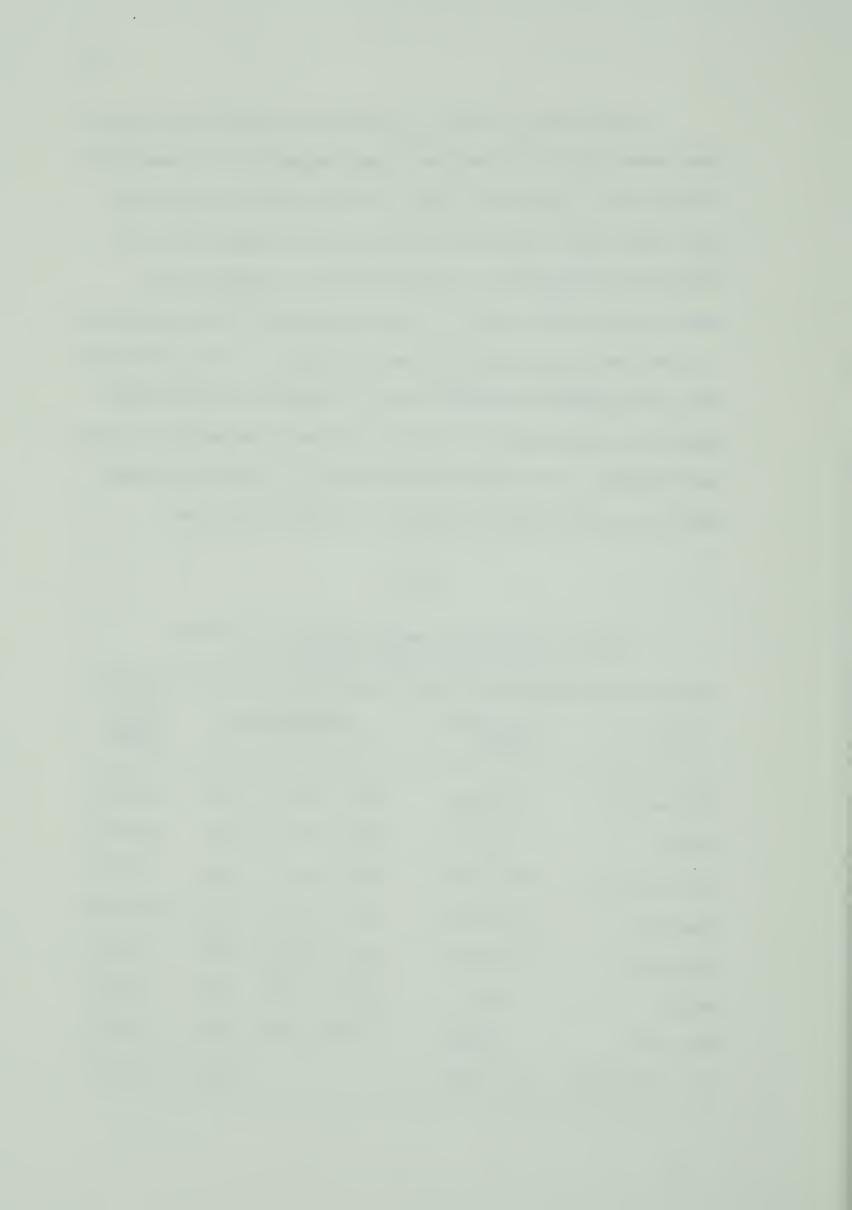


In all subjects except for grade nine guidance the actual grade means fell within the time range suggested by the Department of Education. However the range of times actually provided for each subject was considerably wider than those suggested by the departmental regulations. This would seem to indicate that administrators felt a need to extend the limits of the regulations to permit more flexibility in time allocations. It was also found that approximately one-third of all the sampled schools offered maximum or greater time for the instruction of mathematics, science and literature. Very few schools exceeded the suggested maximum times for social studies, language or physical education.

Table 4

Prescribed and Actual Weekly Instructional Times for Various Core Subjects

	Departmental	Gr	ade Mea	ns	Actual
Subjects	Range	7	8	9	Range
Mathematics	150-225	210.1	209.0	211.6	140-300
Science	150-225	201.2	201.7	203.1	120-260
Social Studies	187.5-262.5	212.6	213.9	215.8	125-320
Language	187.5-262.5	214.4	214.0	214.2	100-300
Literature	112,5-150	135.1	132.6	133.9	60-225
Health	75	81.4	79.6	59.7	30-160
Phys. Ed.	75-150	91.8	90.5	88.9	30-200
Gr. IX Guidance	112.5-150			68.0	25-125



Current Canadian Time Allocation Practices

In connection with the survey of Canadian core programs discussed earlier, the various Departments of Education were also asked what time allocations were suggested for each Alberta core subject. These times are outlined in Table 5.

Since Alberta has the greatest choice of options it would be expected that the time allocations for the core program would be less in Alberta than in the other provinces. This was found to be particularly true in language arts and mathematics. The time allocations for the remaining subjects vary considerably with some provinces allocating more time than Alberta and others less for each subject. In no case is the Alberta time allocation the largest of the provinces. This may be a reflection of the greater emphasis placed on options in Alberta junior high schools.

Of the surveyed provinces only Prince Edward Island and Newfoundland reported no suggested time allocations, while New Brunswick allocates a block of time to be divided between language, mathematics, science and social studies.

LENGTH OF SCHOOL DAY

The length of the school day in the junior high school has been examined by four separate research projects with very similar results being obtained in each case. In 1963 Jarvis found that the average length of the school day was six hours (1963:64). In the same year a report by Greer and Wright (1963:10) outlined the



Table 5

Minutes per Week Allocated to Core Subjects in Various Provinces

Province	Language Arts	Math.	Science	Social	Phys. Ed. & Health	Guidance
Alberta	225-350	150-175	150-175	150-200	120-175	up to 75
British Columbia	260-400	260-330	180-200	180-260	180-200	included in
Saskatchewan	300-360	180-200	160	160	160	40
Manitoba	360	180	180	180	06	75
Ontario	245-280	175-240	175-240	280-310	140-160	35-40
New Brunswick		Block of Ti	Time 900-960 min	min	100	
Nova Scotia	200-320	200-280	120	200	120	
Prince Edward Island	No	suggested	time allocations	cations		
Newfoundland	No	No suggested Time allocations	Time allo	cations		



lengths of school days found in the 1507 American schools they surveyed. Their results are outlined in Table 6.

Percentage Distribution of United States Schools
According to the Length of Their
Instructional Day

Table 6

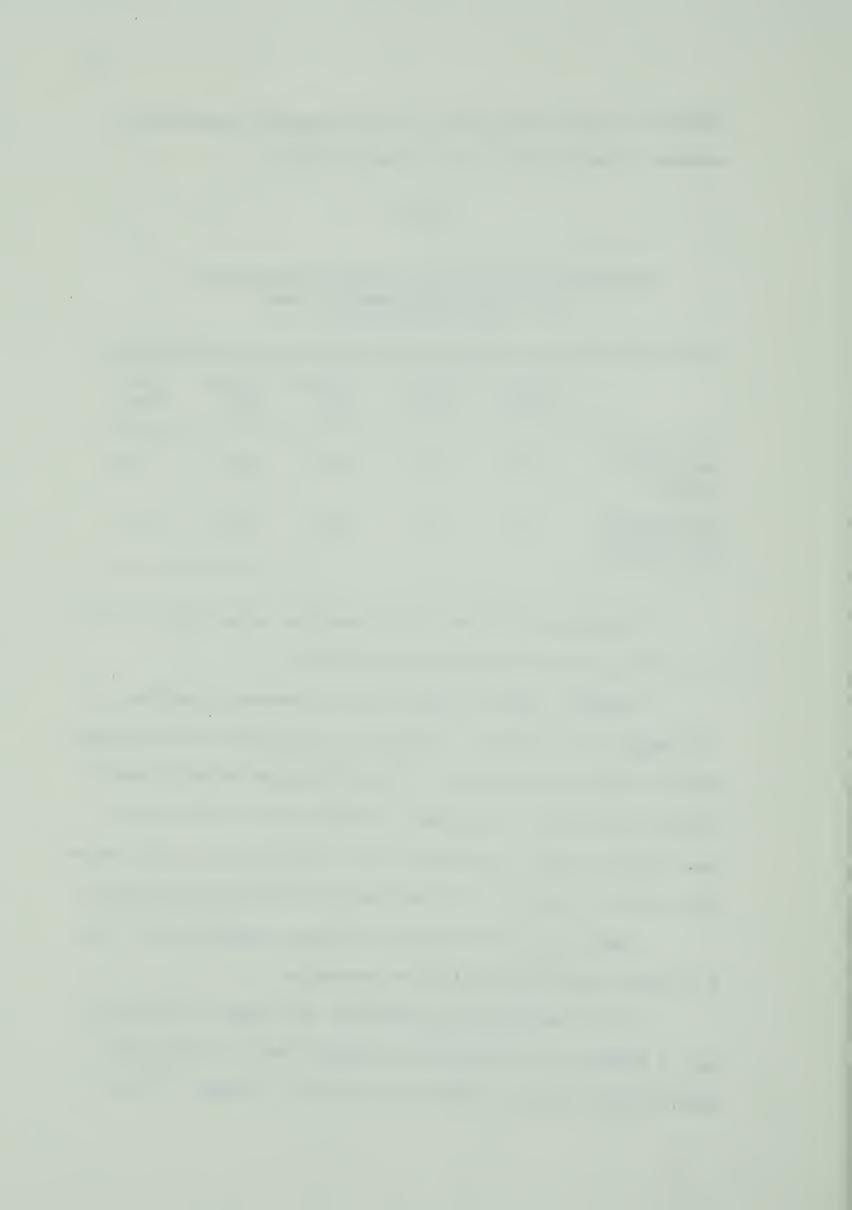
	5 hr. or less	5.25-5.5 hrs.	5.75-6 hrs.	6.25-6.5 hrs.	6.75-7 hrs.
Junior high schools	3.5	11.4	45.5	32,4	7.3
Junior-senior high schools	1.7	9.6	44.4	32.9	11.4

The Wright and Greer study found that school days of 5.75 to 6.5 hours were by far the most prevalent.

Lounsbury (1965:90) found that the average school day, in his sample of 277 schools, consisted of 6.6 periods of 49.5 minutes each or 326.7 minutes per day. The NEA Research Bulletin reports (1969:21) that only 3.7 percent of schools have a school day of less than six hours, 48.7 percent have a school day of six to seven hours and 47.5 percent have school days of more than seven hours.

These four studies indicate that most administrators feel a six hour school day would not be excessive.

In the Deutscher study (1965:33) the length of the school day in Alberta junior high schools ranged from 4.5 to six hours with the mean length of school day being 317.5 minutes. This is



Considerably lower than the United States figures. However the Alberta school year is typically at least 190 days while the NEA Research Bulletin (1969:20) states that 54.5 percent of the American schools offer only a 180 or 181-day school year while 14.2 percent fall below this level and 31.3 percent operate a school year in excess of 180 or 181 days. Therefore the total difference in time is not as excessive as it first appears.

The length of the school day is another area where the principal must largely decide on the most appropriate time by tradition or conformity since little research has been conducted in this area. Conant (1960:25) expresses the opinion that

The total school day including time for homeroom activities, passing between classes and lunch should approach seven hours. This is not an excessive amount of time in most communities.

By removing adequate time for the non-instructional parts of the school day Conant's recommendation is for a school instructional day of about six hours.

Anderson et al (1963:157) concur when they advocate a "school day of six hours exclusive of lunch breaks." This same figure was proposed by supervisors surveyed by the Catholic School Journal (1965:58) as being the most appropriate for today's needs.

In Alberta the Cameron report, cited by Clarke (1960:122) recommended that the length of the school day for the junior high school should be "extended to 330 minutes of instructional time."

One problem which must always be faced in setting the length of the school day is that of minimizing waste time.



Goodlad (1964:12) states: "many proposals speak of more time needed but we must first be sure we are using our present time productively." The luxury of more time can only be justified if we have made the best possible use of the amount of time we now have. This can be done by various methods of scheduling. Nielson and Keropian (1968:11) explain how time can be gained for instruction by using blocks of time of varying lengths. As an example they cite a physical education class which meets five days a week for fifty minutes per day. Of this time twenty minutes per day is lost for changing, showering and changing again. This results in a total of 100 minutes of lost instructional time per week. By scheduling the 250 minute physical education time allocation as one fifty minute class and two 100 minute classes the time loss is still twenty minutes per class but this amounts to only 60 minutes per week. Thus the school gains forty minutes of instructional time per week for physical education. This same method can be used to minimize time losses for science, home economics, industrial arts, art and any other subjects where longer blocks of time would be beneficial.

STUDY PERIODS

Wright and Greer (1963:34) also investigated the percentage of schools which set aside time for study under the supervision of a teacher. Their results are summarized in Table 7.

One notable feature in Table 7 is that the percentage of schools scheduling study periods decreases as the student progresses



through the junior high school. Schools offering junior high instruction only were more likely to offer study periods than were schools which had both junior and senior high classes.

Table 7

Percentage of Schools Scheduling
Study Periods

School Type	Gr. 7	Gr. 8	Gr. 9
Junior high schools	75.4	74.8	71.6
Junior-senior high schools	67.8	64.9	56.1

Deutscher (1965:91) found that approximately fifty percent of Alberta junior high schools scheduled study periods and of these the average amount of time scheduled for study periods was 88.2 minutes per week.

Gorman and Burton (1964:1-13) reporting on the activities of students in study halls found that most of the students worked reasonably well during study periods. Class assignments, review and study were all major activities and students who wasted inordinate amounts of time accounted for only four percent of the total sample.

OPTIONS

Because of its unique position in a student's school career the junior high school must devote a section of its



curriculum to the task of helping the pupil sample specialized areas, broaden his interests and identify special aptitudes and abilities.

Wagner states (1965:57) that "there is a growing belief that these years call for an exploratory type program to discover the interests and talents of these young people."

Gayles (1966:90) holds a similar view when he states:

Junior high school education should lead pupils to discover and explore their specialized interests, aptitudes and abilities as a basis for decisions regarding educational and vocational endeavors.

These opinions are in complete agreement with the basic philosophy underlying the curriculum changes which occurred in the Alberta junior high schools in 1969.

SUMMARY

The foregoing review of the literature has attempted to point out the lack of an adequate research base to guide time allocations and curricular decisions. Decisions in these areas seem to be based on tradition and convenience rather than any experimental evidence.

There seems to be agreement between theorists and practioners that language arts, science, mathematics, social studies, physical education and health should comprise the core program. The relative importance of these subjects, as reflected by time allocations, is still a matter of dispute however. The Alberta core program appears to conform to the ideas and practices



of most educators. The Alberta time allocations appear to be slightly less than those of other Canadian provinces for most of the core subjects. This is undoubtedly related to the greater emphasis placed on the option program in the Alberta junior high school program.

The prevailing length of the instructional day found in previous studies in Alberta is lower than those found in United States studies. The recommendation of the Cameron Commission that junior high schools schedule a 330 minute instructional day appears to have met with little acceptance.



Chapter 3

RESEARCH PROCEDURES

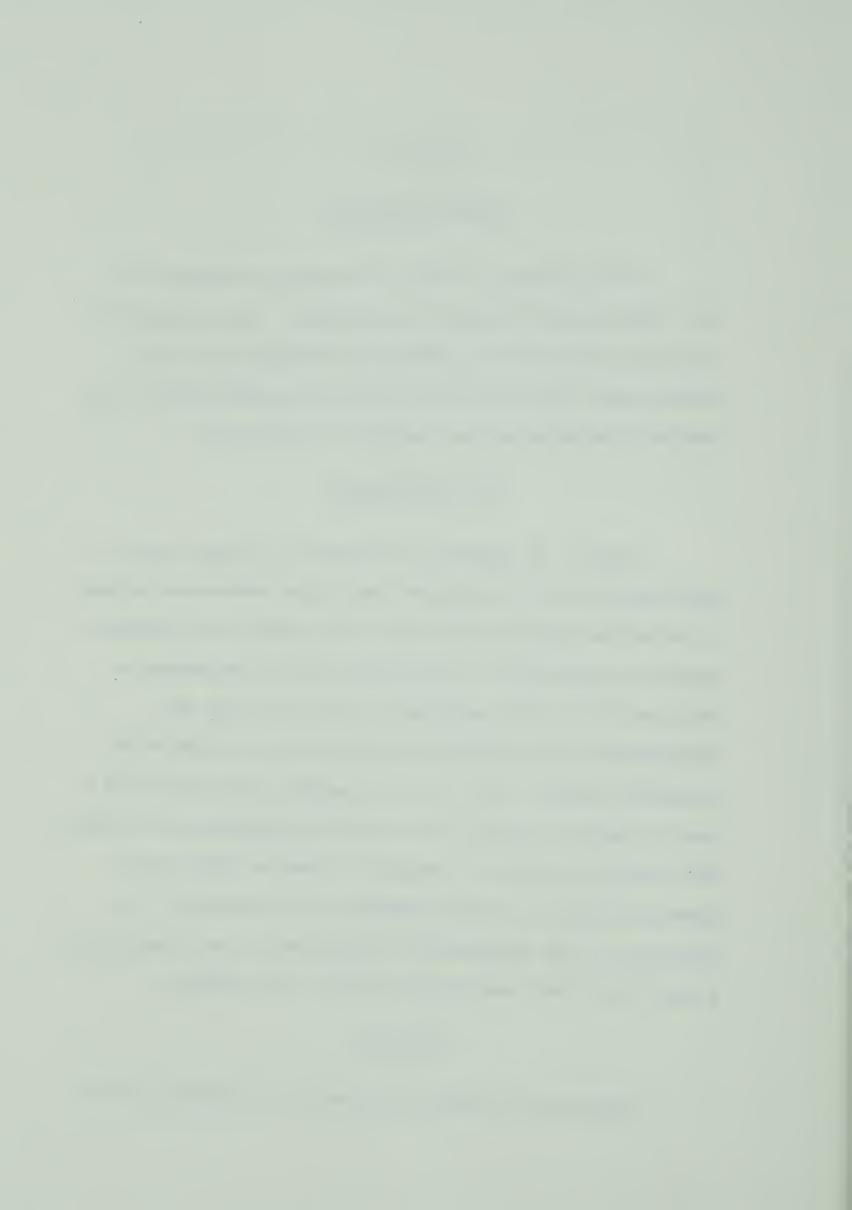
It was decided to collect the necessary information for this study through the use of a questionnaire. Some consideration was given to the use of the Department of Education's school opening report (Form A) but this idea was discarded since all the required information was not available on these forms.

THE QUESTIONNAIRE

Since Mr. W. Sawatzky was working on a related topic the questionnaire which was developed was a joint undertaking designed to survey the sampled schools once and yet obtain the information needed for both studies. Ideas derived from the Department of Education Form A cards, Deutscher's questionnaire and the questionnaire used by Wright and Greer were all included in the preliminary design. This first questionnaire was criticized by a panel of graduate students and a revised questionnaire was produced. This revision was taken to a meeting of Edmonton Public School Board principals for further suggestions and criticisms. The final draft of the questionnaire included many of their suggestions. A copy of the final questionnaire appears in the appendix.

THE SAMPLE

The sample was selected from the List of Operating Schools



in Alberta (1970-71) compiled by the Department of Education.

This list gave easy access to the numbers of schools of various types located in Alberta. The sample was selected from four distinct organizational types of schools. The first type were schools which had only junior high school grades. All schools in this category, a total of seventy-nine, were used in the sample.

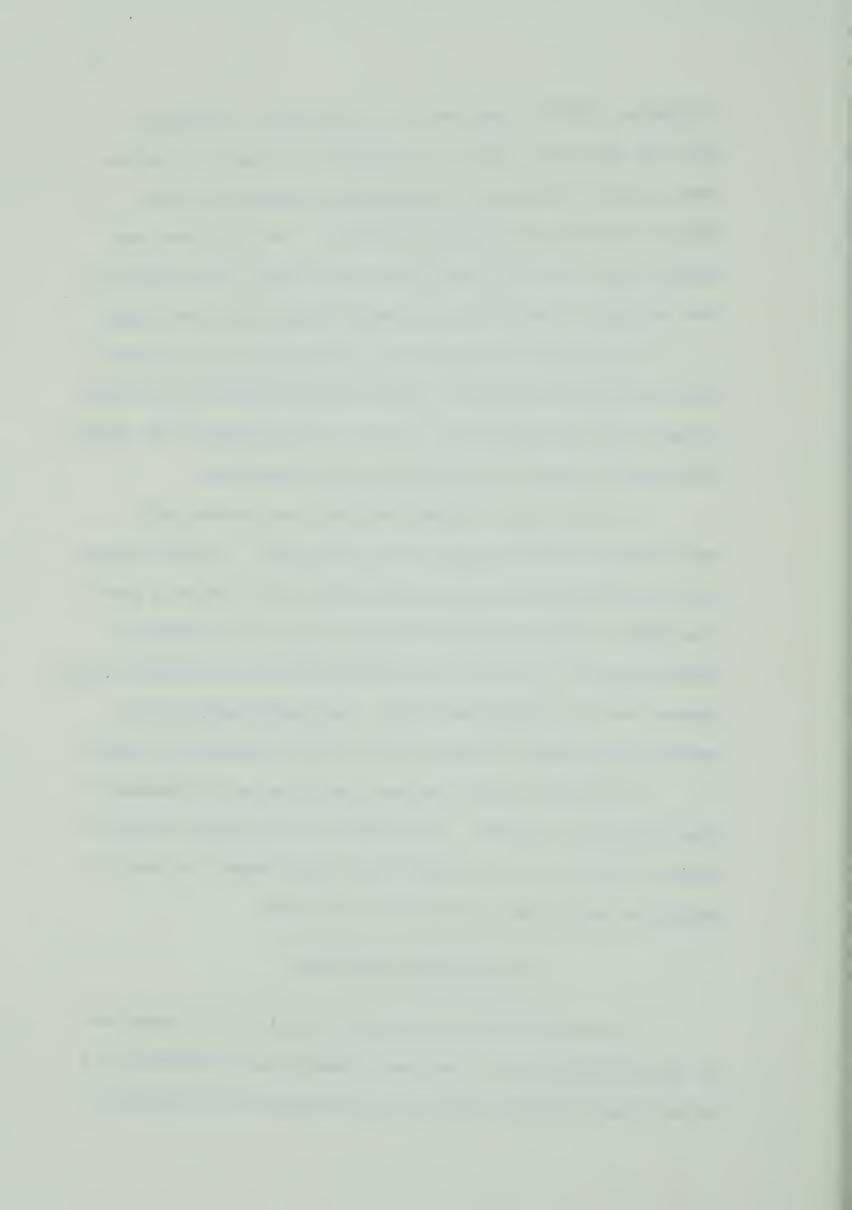
The second type were those schools which had both junior high and senior high grades. Schools in this group were required to have ten or more teachers in order to be accepted in the sample. Fifty-three schools of this type met this requirement.

The third type of school selected were schools which enrolled both elementary and junior high grades. In this instance all those schools with ten or more teachers were used as a group from which a random sample was drawn by the use of a table of random numbers. The size restriction eliminated the smaller schools, however over 170 schools were left. The random sample further reduced this number to obtain a final group of eighty-six schools.

The fourth school type were those that enrolled students from grades one to twelve. Any school in this category required fifteen teachers to be selected in the final sample. A total of eighty-two schools were selected in this group.

DISTRIBUTION AND RESPONSE

The questionnaires were mailed directly to the principals of the selected schools. Each questionnaire was accompanied by a letter from Dr. Hrabi, Director of Curriculum for the Department



of Education, encouraging response. Mr. Sawatzky and I also enclosed a letter to explain the purpose of the research. Questionnaires were numbered to facilitate collection of the data and the principals were assured that their anonymity would be respected.

The response to the questionnaire is outlined in Table 8.

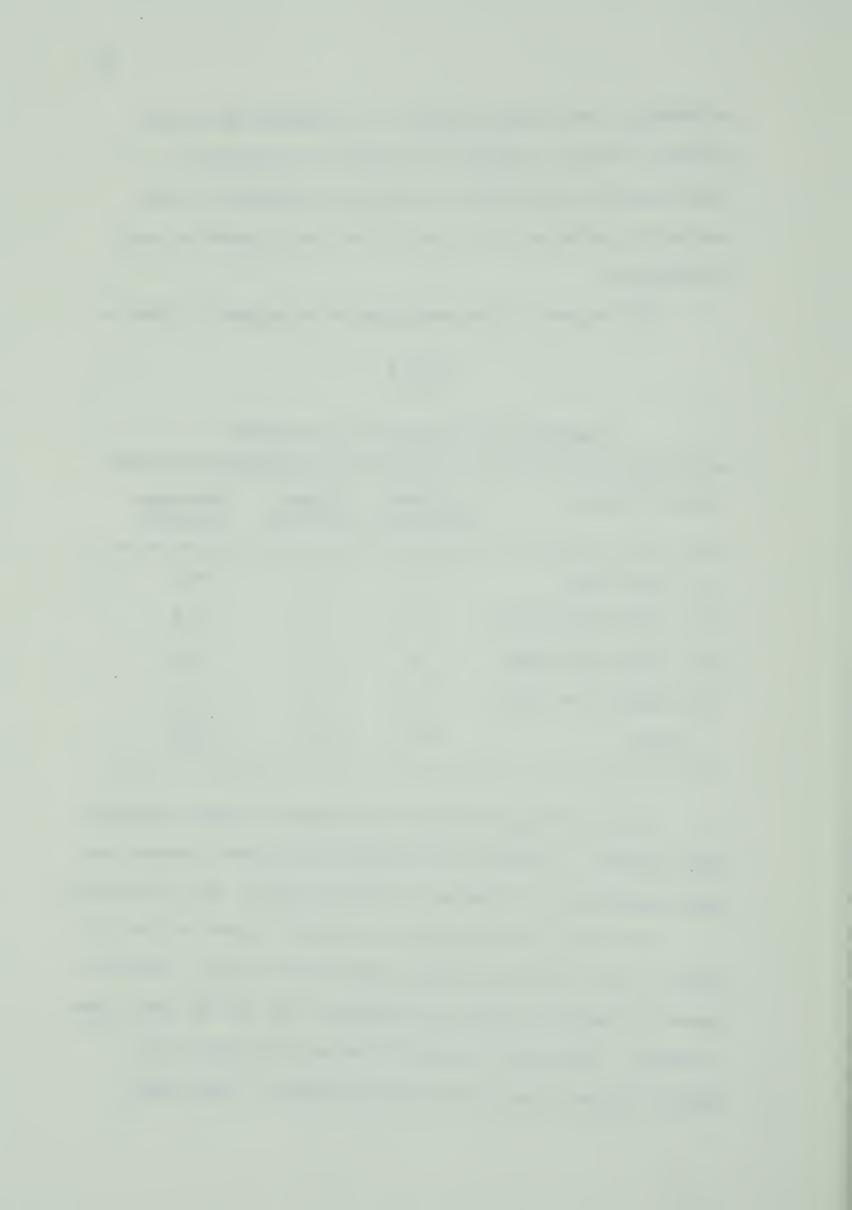
Table 8

Questionnaire Distribution and Response

Type of School	Number Distributed	Number Returned	Percentage Returned
I - Junior High	79	51	64.5
II - Junior-Senior High	53	41	77.4
III - ElemJunior High	86	55	64.0
IV - ElemJrSr. High	82	60	73.2
Total	300	207	69.0

Of the 300 questionnaires distributed 207 usable responses were obtained. In addition five questionnaires were returned that were unusable due to omissions in certain areas of the questionnaire.

One item of interest was that schools classed as Type II or Type IV, that is those with senior high school classes, returned a greater percentage of their questionnaires than did the other types of schools. This may be related to the fact that most of the schools in Types II and IV are located outside of large urban



centres and thus receive fewer questionnaires than do other types of schools.

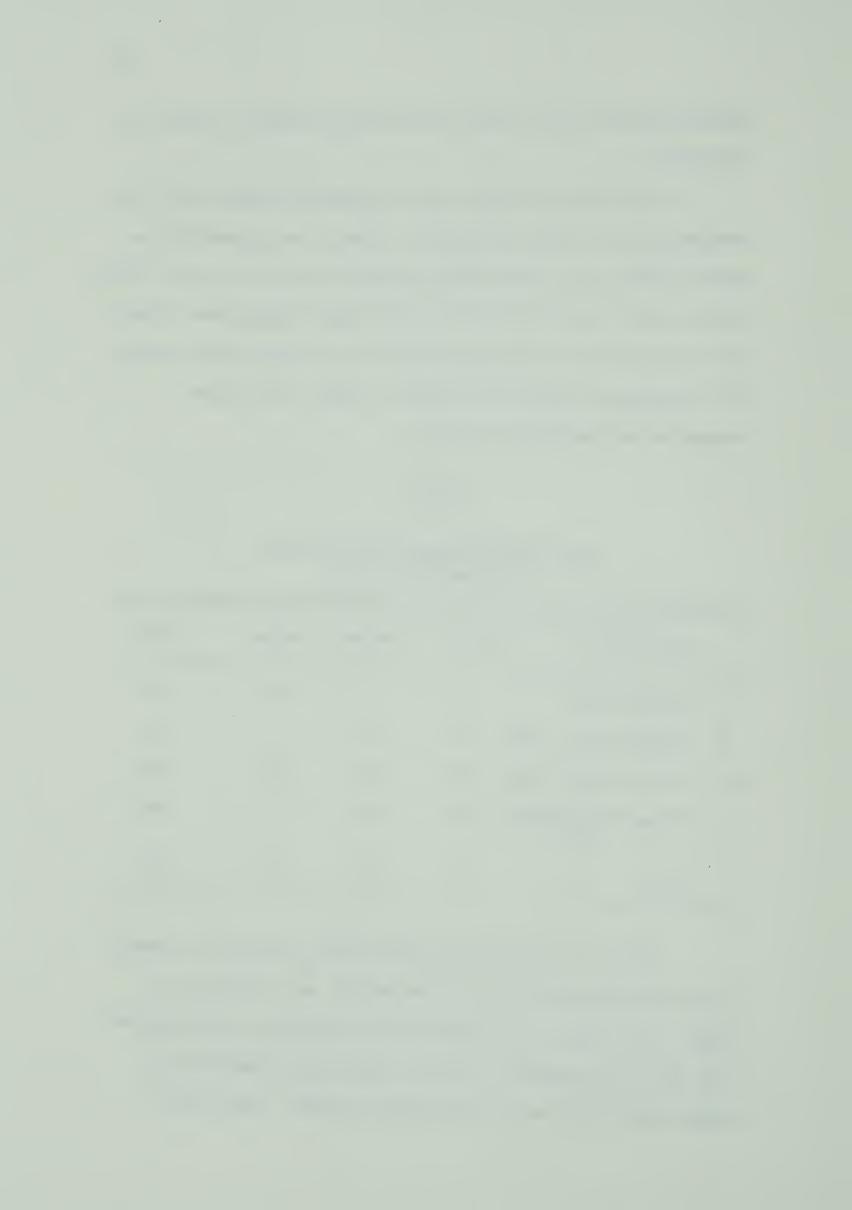
As the questionnaires were returned the schools were also categorized into three size groups. Schools were classified as small if their total junior high enrolment was 135 or less. Medium schools were those that had 136 to 300 junior high school students while large schools had more than 300 junior high school students. The relationship between the types of school and the size categories are outlined in Table 9.

Table 9

Relationship Between Type and Size of Responding Schools

School Type	Small	Medium	Large	Total
I - Junior high	0	9	42	51
II - Junior-Senior high	8	24	9	41
III - ElemJunior high	19	22	14	55
IV - ElemJunior-Senior high	45	15	0	60
Total	72	70	65	207

The size classification used permits seventy-two schools to be classed as small, seventy as medium, and sixty-five as large. The various school types had some distinct relationships with the size categories. Type I, junior high schools, were mainly large with none being classed as small. This is not



surprising if one considers that in order to support a junior high school a district would require a fairly large student body.

Most Type II schools were medium in size with fairly equal distribution of the remaining schools between the large and small categories. Type III schools had a few instances of large schools but the majority were split between the medium and small size categories.

Type IV schools were mainly small with none being classed as large. Once again it is reasonable to assume that if a school is organized on a grade one to twelve basis it would be serving a small school population.

As the organizational pattern changes from Type I schools through to Type IV schools it appears that the schools tend to become smaller. This change in school size is further illustrated in Table 10.

Table 10

Number of Students in Various Grades of the Basic School Types

Туре	Number of Schools	Gr. 7	umber of Gr. 8	Students Gr. 9	Total	Mean Number of Students per School
I	51	8248	8668	7691	24,607	482
II	41	2779	3155	3285	9,219	225
III	55	3827	3668	3380	10,875	198
IV	60	2389	2288	2374	7,051	118
Total	207	17,243	17,779	16,730	51,752	250



Table 10 illustrates that the organizational specialization of a school is related to the school's size. Type I schools have only junior high grades and average 482 pupils per school. Type II schools have both junior and senior high grades and average 225 pupils per school. Type III schools involve both elementary and junior high grades and average 198 pupils per school and Type IV schools which involve all grades average only 118 pupils per school.

TREATMENT OF THE DATA

As the questionnaires were returned data were transferred from them to data tabulation forms. I.B.M. cards were punched by reference directly to the tabulation forms and were then used in the statistical analyses which were done by computer.

Statistical Treatment

The time allocations for the various subjects were analyzed by obtaining means for the various types and sizes of schools and testing for significant differences between these means.

A Scheffé test was used to compare the various means to locate any significant differences that existed. The Scheffé test was used since it will allow comparisons of more than two means at a time.

Ferguson states (1966:297) that the Scheffé test "is easy to apply. No special problems arise because of unequal n's".

Although both size categories and type classifications have fairly equal numbers in each group it was felt that a test should be



selected that is relatively uninfluenced by any differences which did exist. Another reason for selecting the Scheffé test was that it is not seriously affected by violations of the assumptions of normality of distribution and homogeneity of variance.

The Scheffe test is also more rigorous than other tests for significant differences between means. Because of this Ferguson (1966:297) suggests using the .10 level of significance. This suggestion was followed throughout this study. It must be remembered, in the report of any significant differences found, that this is the level of significance accepted.



Chapter 4

CORE TIME ALLOCATION

This chapter contains data dealing with the core subjects.

The data were analyzed according to both school type and school size. Each of the core subjects was analyzed separately to show variations that existed in the different types and sizes of schools.

These variations will be illustrated in three different ways. Means of the time allocations for each of the core subjects were determined for each grade of the various school categories.

Ranges of time allocations within each grade of the various school categories were determined by locating the least and the greatest actual time allocation used by schools within the category being analyzed.

Distributions of time allocations were also determined. In this analysis the terms 'minimum or less time' and 'maximum or more time' are used. This does not necessarily mean that schools are allocating outside the suggested range, although this may be the case. Schools falling in these categories may be allocating time at the limits of the suggested departmental range. This situation will be clarified as required in the explanations of the various core subjects.

A summary section treats the schools as an entire group to obtain overall means for each core subject.



MATHEMATICS

The Department of Education regulations require that mathematics be offered from 150 to 175 minutes per week.

Type Analysis

The variations in time allocated to mathematics in various organizational patterns of schools are outlined in Table 11.

Table 11

Instructional Time in Minutes per Week
Allocated to Mathematics

			Means		A	ctual Range	es
Туре	N	Gr. 7	Gr. 8	Gr. 9	Gr. 7	Gr. 8	Gr. 9
I	51	196.3	192.5	191.1	150-277	150-262	150-262
II	41	187.1	184.5	186.2	160-240	160-210	160-240
III	55	180.2	181.7	181.5	150-230	150-230	150-230
IV	60	185.6	183.3	183.4	160-240	160-240	155-208
Signi diffe between		I-III	none	none			

Type I - Junior high schools

The major factor observed was that in all categories the the mean instructional time per week was in excess of the maximum suggested by departmental regulations. In each grade, Type I

Type II - Junior-senior high schools

Type III - Elementary-junior high schools

Type IV - Elementary-junior-senior high schools



schools (those having only junior high grades), schedule the most time for mathematics, followed by Type II schools, Type IV schools and lastly Type III schools.

In grade seven the Scheffe test found a significant difference between Type I and Type III schools. There were no significant differences in the variations within the grade eight or grade nine time allocations.

Although not tested statistically there appeared to be a general trend to reduce the amount of time scheduled for mathematics as the grade level in a particular school type increased.

The actual ranges of time used in the sample schools, as outlined in Table 11, show variations considerably in excess of the departmental regulations which suggest only a twenty-five minute per week variation in time allocations. In actual practice the shortest variation was fifty minutes while the longest was 127 minutes. The mean of the twelve actual ranges was 84.5 minutes or 3.4 times the suggested range.

No school allocated time below the 150 minute per week suggested minimum while in every category the suggested maximum was exceeded.

Size Analysis

The variations in time allocated to mathematics in various sizes of schools are outlined in Table 12.

A notable characteristic of these variations was that small and medium schools were very similar in time allocations



with large schools allocating much more time than either of the other sizes. By analysis of the Scheffe results it was found that the differences between the means of the small and large schools, and between the medium and large schools were significant in each grade. This difference was also reflected by the ranges of time allocated where the large schools had a much wider range of times than did the other types of schools.

Table 12

Instructional Time in Minutes per Week
Allocated to Mathematics

Size	N	Gr. 7	Means Gr. 8	Gr. 9	Gr. 7	Ctual Range Gr. 8	es Gr. 9
S	72	180.9	180.2	180.6	150-240	150-240	150-205
М	70	182.5	180.1	180.7	150-215	150-215	150-215
L	65	198.8	196.8	195.6	150-277	150-262	150-262
Signi diffe betwe		S-L M-L	S-L M-L	S-L M-L			

Small - up to 135 students Medium - 136 to 300 students Large - over 300 students

Distribution of Time Allocations

The percentages of the various school types allocating time at or below the suggested minimum, within the suggested range and at or above the suggested maximum are outlined in Table 13.

In each grade the junior high schools and elementary-junior



Table 13

Percentage Distribution of Time Allocations for Mathematics by Type of School

			Percentage Allocati	ng	
Gra	de Type	Minimum time or less	Within the suggested range	Maximum time	
	I	2.0	23.6	74.5	
	II	0.0	34.2	65.8	
Seven	III	7.3	32.8	60.0	
	IV	0.0	36.7	63.3	
(overall	2.4	31.8	65.8	
	I	2.0	31.4	66.7	
	II	0.0	36.5	63.4	
Eight	III	5.5	30.9	63.6	
	IV	0.0	41.7	58.3	
(overall	1.9	34.3	63.8	
	I	2.0	29.4	68.6	
	II	0.0	36.5	63.4	
Nine	III	5.5	32.8	61.8	
	IV	0.0	40.0	60.0	
	overal1	1.9	34.7	63.4	



high schools (Types I and III) were the only types of schools that allocated minimum time or less to the study of mathematics.

For all grades of all types of schools, except Type IV grade eight, at least sixty percent of the schools allocate at or above the maximum suggested time. For each grade, junior high schools (Type I) had the greatest percentage of schools allocating at or above the suggested maximum time.

This table would seem to suggest that the responding principals felt the current suggested time allocations were inadequate and more time was needed for the study of mathematics.

The variations in time allocations for mathematics in various sizes of schools are outlined in Table 14.

As was noted earlier, when discussing the means of the time allocations in various sizes of schools, small schools and medium schools are closely related with the large schools being considerably different. At least eighty percent of the large schools allocated maximum or more time for mathematics in every grade. The small and medium schools were considerably below this level but in all size categories well over fifty percent of the schools allocated maximum or more time to mathematics.

Summary

The analyses of the time allocations for mathematics point out that most school administrators feel the current suggested time range is somewhat inadequate. This is evidenced by the fact that all grade means for all types and sizes of schools fell well



Table 14

Percentage Distribution of Time Allocations for Mathematics by Size of School

				Percentage Allocati	ng	
Grade		Size	Minimum time or less	Within the suggested range	Maximum time or more	
		S	1.4	41.7	56.9	
Seven		M	4.3	37.2	58.5	
seven		L	1.5	15.4	83.1	
	ove	rall	2.4	31.8	65.8	
		S	1.4	43.1	55.5	
Eight		M	2.9	42.9	54.2	
rigiic		L	1.5	15.4	83.1	
	ove	rall	1.9	34.3	63.8	
		S	1.4	41.7	56.9	
Nine		M	2.9	42.9	54.2	
ATHE		L	1.5	18.5	80.0	
	ove	rall	1.9	34.7	63.4	



above the suggested maximum time allocation. Further evidence is found when we consider that only 34.2 percent of all grade seven classes allocate within or below the suggested range. This figure was 36.2 percent for grade eight and 36.6 percent for grade nine. This means that of the schools responding at least sixty percent feel a need to allocate time for mathematics at the suggested maximum or above. Schools which are organized as junior high schools or are in the large category tended to allocate greater amounts of time to the study of mathematics than the other types of schools.

SCIENCE

The Department of Education regulations require that science be offered from 150 to 175 minutes per week.

Type Analysis

The variations in time allocated to science in the various organizational patterns of schools are outlined in Table 15.

As was the case in mathematics the mean instructional time per week for science was in excess of the maximum time suggested by the departmental regulations in all categories. Once again the junior high schools (Type I) allocated the most time for science followed by Type II, Type IV and Type III schools. This order was identical to that obtained for mathematics.

The only significant difference the Scheffe test located in the differences between the mean times allocated for science occurred between Type I and Type III schools in grade seven.



The ranges in Table 15 show variations considerably in excess of the departmental regulations which suggest only a twenty-five minute weekly variation in time allocations. The shortest variation was forty minutes while the longest was 135 minutes. The mean variation in the twelve actual ranges was eighty minutes or 3.2 times the suggested range.

Table 15

Instructional Time in Minutes per Week
Allocated to Science

			Means		A	ctual Rang	es
Туре	N	Gr. 7	Gr. 8	Gr. 9	Gr. 7	Gr. 8	Gr. 9
I	51	189.4	183.9	185.0	150-245	150-245	150-245
II	41	182.8	184.2	181.3	160-220	160-240	160-200
III	55	177.1	176.0	176.2	135-270	150-210	150-210
IV	60	181.8	182.6	182.4	160-240	150-240	160-240

Only one school allocated time considerably below the suggested minimum time, however every category had maximum times well above the suggested maximum.

Size Analysis

The variations in time allocated to science in various sizes of schools are outlined in Table 16.

As was noted in the analysis of time allocations for mathematics, small and medium schools were closely related in



both mean times and ranges of time allocations. Large schools had a much higher mean and also a wider range of time allocations than the other two groups.

Table 16

Instructional Time in Minutes per Week
Allocated to Science

			Means		Ac	ctual Range	es
Size	N	Gr. 7	Gr. 8	Gr. 9	Gr. 7	Gr. 8	Gr. 9
S	72	178.6	179.6	179.6	150-240	150-240	150-208
M	70	178.2	176.0	175.7	150-240	150-210	150-215
L	65	191.8	189.4	188.8	135-270	150-245	150-245
Signi diffe betwe		S-L M-L	S-L M-L	S-L M-L			

The differences between the mean times allocated to science in the large schools and the small schools and also between the medium schools and the large schools were found to be significant at every grade level.

Distribution of Time Allocations

The percentages of the various school types allocating time at or below the suggested minimum, within the suggested range and at or above the suggested maximum are outlined in Table 17.

A greater percentage of schools organized as elementaryjunior high schools (Type III) allocated time at or below the



Table 17

Percentage Distribution of Time Allocations for Science by Type of School

			Percentage Allocati	ng
Grade	Type	Minimum time or less	Within the suggested range	Maximum time or more
	I.	2.0	31.4	66.7
	II	0.0	43.9	56.1
Seven	III	10.9	36.4	52.7
	IV	0.0	45.0	55.0
ove	erall	3.4	39.2	57.5
	I	2.0	37.2	60.7
	II	0.0	39.0	61.0
Eight	III	10.9	38.2	50.9
	IV	1.7	41.7	56.7
ov	erall	3.8	39.2	57.1
	I	2.0	33.2	64.7
	II	0.0	46.4	53.7
Vine	III	9.1	41.8	49.1
	IV	0.0	41.7	58.3
ov	erall	2.9	40.6	56.6



suggested minimum time than did other types of schools. This
feature was also noted in the time allocations for mathematics.
The percentage of schools allocating at or above the suggested
maximum time is not as great for science as it was for mathematics,
however in all but one category over fifty percent of the schools
do allocate at or above the suggested maximum time.

The junior high schools (Type I) once again seem to have a greater inclination to allocate time at or above the suggested maximum.

The variations in time allocations for science in various sizes of schools are outlined in Table 18.

As was noted in time allocations for mathematics a greater percentage of large schools than small or medium schools allocated maximum or more time to the instruction of science. One interesting aspect is that a greater proportion of small schools than medium schools allocated maximum or more time to the study of science. The percentage allocating at or below the minimum suggested time is fairly evenly distributed between the three size categories of schools.

Summary

The data obtained for time allocations in science suggest once again that some inadequacies exist in the current departmental regulations. The evidence relating to science was not as strong as that found in mathematics since the mean times for science are all less than those for mathematics. The science means are still



Table 18

Percentage Distribution of Time Allocations for Science by Size of School

			Percentage Allocat	ing
Gr	ade Size	Minimum time or less	Within the suggested range	Maximum time
	S	2.8	45.8	51.4
Seven	М	2.9	50.0	47.4
seven	L	4.6	20.0	75.4
	overal1	3.4	39.2	57.5
	S	2.8	45.8	51.4
Ed ala	М	4.3	48.6	47.2
Eight	L	4.6	21.6	73.8
	overall	3.9	39.2	57.1
	S	1.4	44.4	54.2
Nine	М	4.3	52.9	42.9
	L	3.1	23.1	73.8
	overal1	2.9	40.6	56.6



above the suggested maximum however. In grade seven 42.6 percent of all schools allocated within, or below, the suggested range. Forty-three and one-tenth percent of all grade eight classes and 43.5 percent of all grade nine classes also fall in this range. This means that in the sample schools over fifty percent allocated maximum or more time to the study of science.

Schools organized as junior high schools or those within the large category tended to allocate more time to science than other types of schools. On the other hand medium schools or elementary-junior high schools tended to offer the smallest amount of time for science.

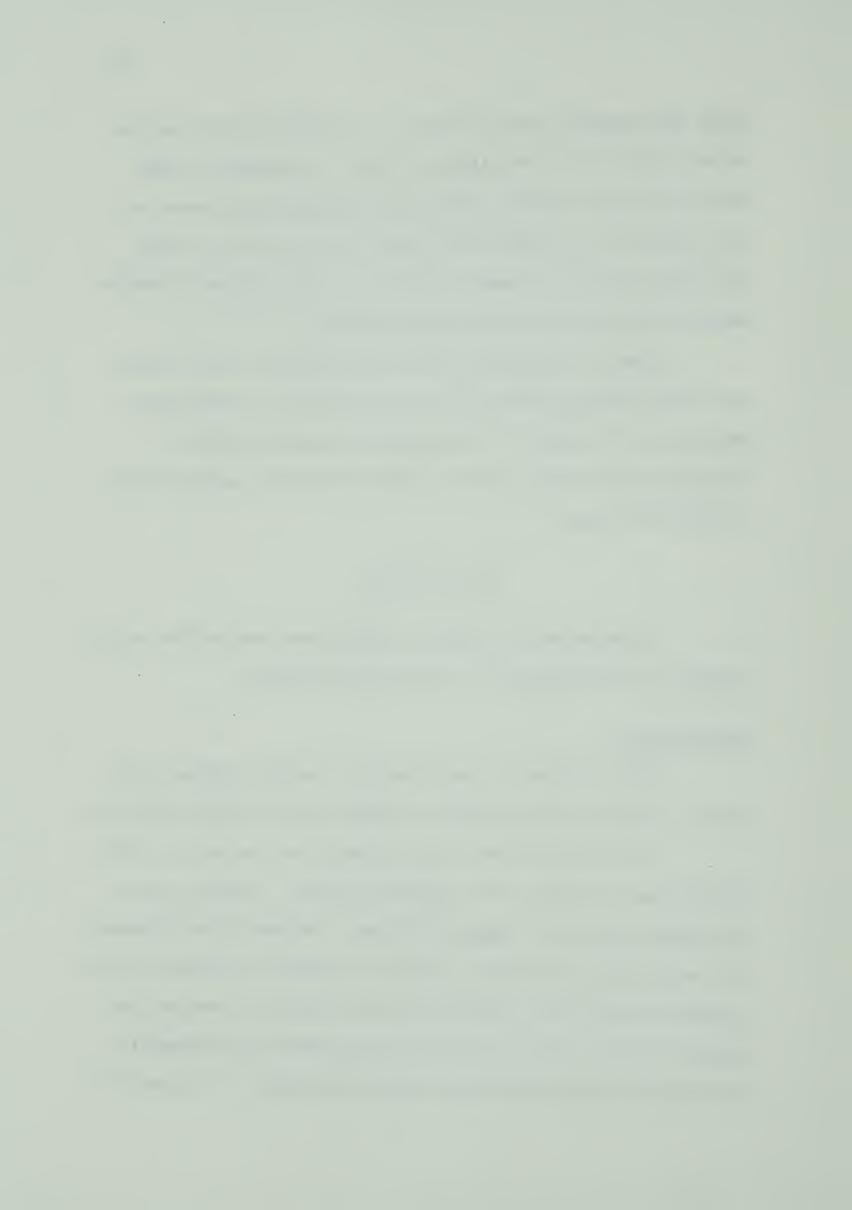
SOCIAL STUDIES

The Department of Education regulations require that social studies be offered from 150 to 200 minutes per week.

Type Analysis

The variations in time allocated to social studies in the various organizational patterns of schools are outlined in Table 19.

In all cases the mean instructional time for social studies fell in the top third of the suggested interval. However none of the means exceeded the suggested maximum. The mean times allocated for social studies are fairly similar to those for mathematics with elementary-junior high schools (Type III) having the smallest mean. However a major difference between social studies and mathematics or science is that junior-senior high schools (Type II) rather than



junior high schools have the largest mean of the four school types.

Table 19

Instructional Time in Minutes per Week
Allocated to Social Studies

			Means		A	ctual Rang	es
Туре	N	Gr. 7	Gr. 8	Gr. 9	Gr. 7	Gr. 8	Gr. 9
I	51	195.0	192.7	190.7	150-262	150-262	150-245
II	41	195.3	194.8	196.8	160-220	160-200	160-200
III	55	185.4	185.2	185.1	150-225	150-225	150-225
IV	60	192.0	194.5	191.8	150-240	160-240	150-240
Significant difference between		none	none	II-III			

The only significant difference by type of school between the mean times allocated for social studies occurred in grade nine between Type II and Type III schools.

Social studies seems to depart from the previously noted, but not statistically tested, trend of reducing time allocations for a subject as the grade level increases. In the case of social studies the time allocations remain basically the same throughout the grades.

The ranges of time allocated to social studies once again generally exceeded the suggested fifty minutes. The greatest variation was 112 minutes and the smallest was forty. The mean of the twelve actual ranges was 78.7 minutes which was less than that



of mathematics or science. The actual range was 1.6 times as great as the suggested range. In no categories did schools allocate less than the 150 minute minimum but all, except two, categories did exceed the suggested maximum.

Size Analysis

The variations in time allocated to social studies in various sizes of schools are outlined in Table 20.

Table 20

Instructional Time in Minutes per Week
Allocated to Social Studies

Size	N	Gr. 7	Means Gr. 8	Gr. 9	Gr. 7	ctual Range Gr. 8	Gr. 9
S	72	189.0	190.6	189.4	150-225	150-225	150-225
M	70	190.9	190.5	190.5	150-240	150-240	150-240
L	65	195.4	194.0	192.5	150-262	150-262	150-245
Significant difference between		none	none	none			

In the case of social studies no significant differences between means were found in any grade. Although large schools still tended to allocate more time to social studies than did smaller schools this difference was not statistically significant. The means for the time allocations to social studies remained fairly constant in any size school throughout the grades.



The ranges of time allocated for social studies are very similar with large schools having a slightly wider range of times.

Distribution of Time Allocations

The percentage distribution of instructional time for social studies is outlined in Table 21.

In each of grades seven, eight and nine the overall percentage of schools allocating time at or above the suggested maximum exceeded sixty percent.

The junior-senior high schools (Type II) and elementary-junior-senior high schools (Type IV) tended to allocate time at or above the suggested maximum for social studies in a greater proportion of schools than did the other categories of schools. This is different from mathematics and science where junior high Schools (Type I) held this position. Elementary-junior high schools (Type III) still had a smaller proportion of their schools allocating maximum or more time for social studies. This finding was consistent with the results for mathematics and science.

The variations in time allocations for social studies in schools of various sizes are outlined in Table 22.

The information contained in Table 22 is much different from that found for mathematics and science. In this case the smaller schools have a greater percentage of cases allocating at or above the suggested maximum time for social studies. The differences between sizes of schools in respect to the percentage which allocate maximum or more time are not as great as was found



Table 21

Percentage Distribution of Time Allocations for Social Studies by Type of School

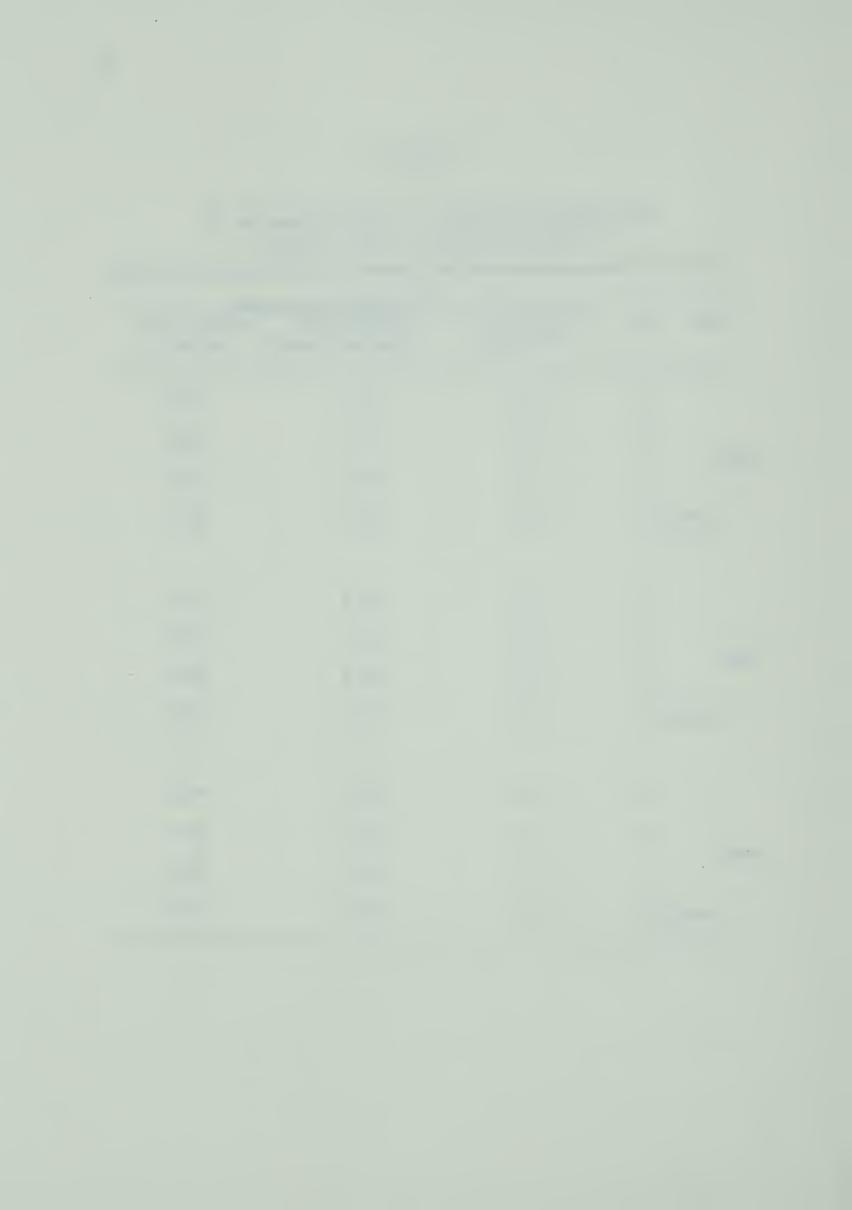
Gra	ade Type	Minimum time or less	Within the suggested range	Maximum time or more
	I	2.0	41.2	56.9
	II	0.0	17.1	82.9
Seven	III	5.5	60.0	34.6
	IV	1.7	23.3	75.0
	overal1	2.4	36.2	61.4
	I	2.0	43.1	54.9
	II	0.0	17.1	82.9
Eight	III	3.6	60.0	36.4
	IV	0.0	20.0	80.0
	overal1	1.4	35.8	62.8
	I	2.0	49.1	49.1
	II	0.0	14.6	85.4
Nine	III	3.6	58.2	38.2
	IV	1.7	23.3	75.0
	overall	1.9	37.2	60.9



Table 22

Percentage Distribution of Time Allocations for Social Studies by Size of School

			Percentage Allocati	ng
Grade	e Size	Minimum time or less	Within the suggested range	Maximum time or more
	S	2.8	33.4	63.8
Seven	M	2.9	37.2	60.0
seven	L	1.5	38.4	60.0
ove	erall	2.4	36.2	61.4
	S	1.4	33.4	65.3
	M	1.4	35.7	62.9
Eight	L	1.5	38.4	60.0
ove	erall	1.4	35.8	62.8
	S	2.8	32.0	65.3
27.0	М	1.4	37.2	61.5
Nine	L	1.5	43.2	55.3
ove	erall	1.9	37.2	60.9



in mathematics and science.

Summary

The data obtained for time allocations in social studies suggested that once again some inadequacies exist in the current suggested range. However the mean time allocations in all cases, regardless of whether the schools are grouped by type or size, fell within the suggested range.

In social studies 38.6 percent of all grade seven classes, 37.2 percent of all grade eight classes and 39.1 percent of all grade nine classes allocated time within or below the suggested range.

Schools categorized as junior-senior high schools or large schools tended to offer greater mean amounts of time for social studies.

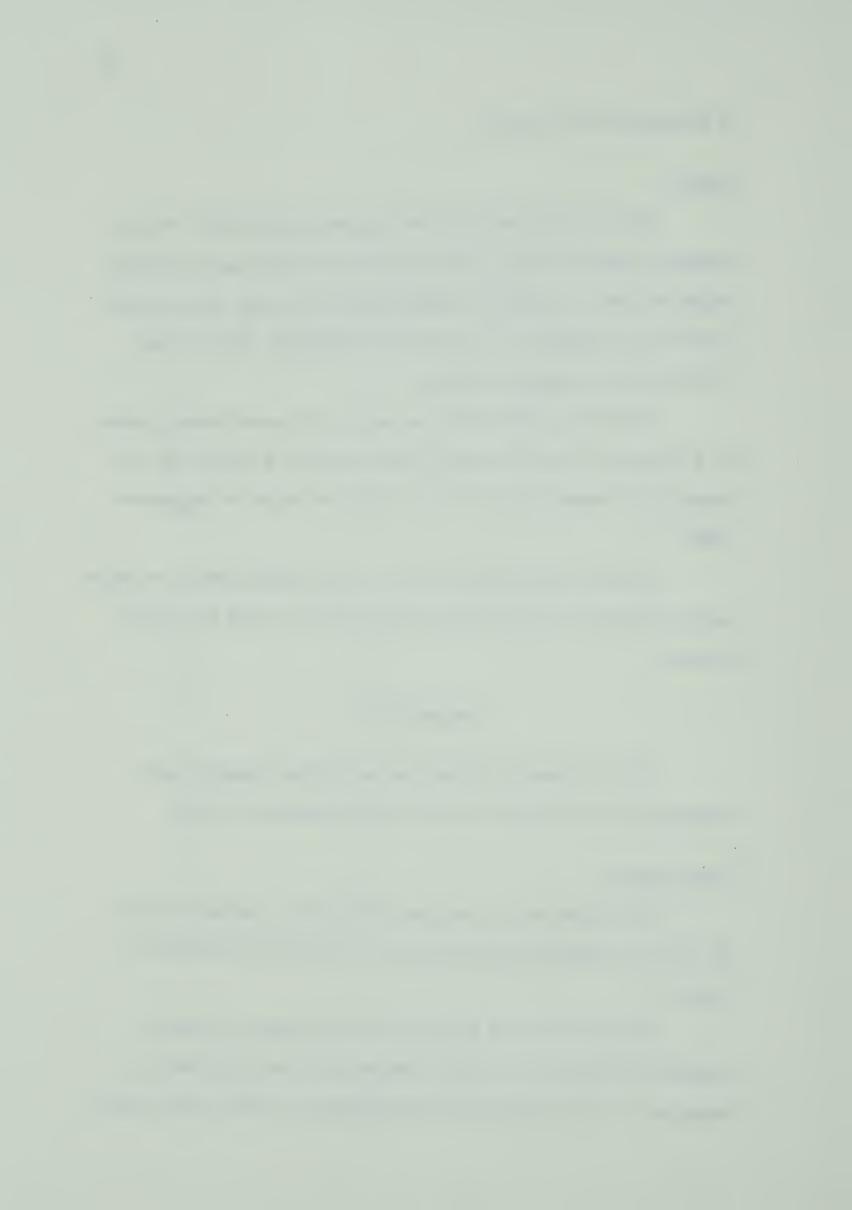
LANGUAGE ARTS

The Department of Education regulations require that language arts be offered from 225 to 350 minutes per week.

Type Analysis

The variations in the time allocated to language arts in the various organizational patterns of schools are outlined in Table 23.

The mean times in all grades of all types of schools surveyed fell within the limits suggested by the Department of Education. In each grade schools organized as junior high schools



(Type I) had the greatest mean time allocations and those that were elementary-junior high schools (Type III) had the least mean time allocations. This result is consistent with those obtained for both mathematics and science.

Table 23

Instructional Time in Minutes per Week
Allocated to Language Arts

			Means		Ac	ctual Range	es
Type	N	Gr. 7	Gr. 8	Gr. 9	Gr. 7	Gr. 8	Gr. 9
I	51	319.1	311.7	309.3	200-440	200-430	200-420
II	41	309.0	307.6	307.8	200-400	200-400	200-400
III	55	294.7	291.7	291.7	200-410	200-440	200-400
IV	60	300.1	299.8	295.9	200-400	200-400	200-400
Signi: diffe: betwee		I-III	none	none			

The only significant difference in mean times allocated for language arts was in grade seven between Type I and Type III schools.

A trend similar to that found for mathematics (a tendency to reduce time allocations throughout the grades) was also noted, although not tested statistically, in language arts. This reduction occurred in six of the eight grade changes analyzed in Table 23.

The ranges of time allocations for language arts in all



categories exceeded the departmental suggestion of 125 minutes. The greatest range was 240 minutes and the mean range was 211.7 minutes. This is 1.7 times as much as the suggested range.

The wide variations in time allocations for language arts are further reflected when it is noted that every type and grade of school has some instances of time allocations both below the suggested minimum and above the suggested maximum.

Size Analysis

The variations in time allocated to language arts in various sizes of schools are outlined in Table 24.

Table 24

Instructional Time in Minutes per Week
Allocated to Language Arts

Size	N	Gr. 7	Means Gr. 8	Gr. 9	Act	tual Ranges Gr. 8	Gr. 9
	7.0	006.7	206		000 / 00		
S	72	296.7	296.6	292.9	200-400	200-400	200-400
М	70	304.3	301.1	300.4	200-400	200-400	200-400
L	65	315.4	309.2	309.9	200-440	200-440	200-440
differ between		S-L	none	none			

In time allocations for language arts the same general trend for time allocations to increase with the size of the school was once again noted. Large schools have in all grades both the greater means and the wider ranges of time allocations. The



differences between the mean time allocations were significant only in grade seven between the small and large schools.

Distribution of Time Allocations

The percentage distribution of instructional time for language arts is outlined in Table 25.

The distribution of time allocations for language arts is markedly different from those observed for mathematics, science and social studies. In language arts a total of over eighty percent of the schools allocated time within the suggested range. For mathematics only 33.6 percent of the schools were within the suggested range and this figure was 39.7 percent for science and 36.4 percent for social studies. This would seem to indicate that the suggested range of time allocations for language arts is acceptable to most administrators. Only a few schools allocated time for language arts at or above the suggested maximum and an even smaller group allocated minimum time or less.

Schools organized as junior high schools (Type I) or elementary-junior-senior high schools (Type IV) tended to allocate maximum or more time for language arts more frequently than other types of schools. Elementary-junior high schools once again tended to be in the lower categories of time allocations.

The variations in time allocations for language arts in various sizes of schools are outlined in Table 26.

The distribution of language arts time allocations are fairly uniform for all grades and sizes of schools. One notable



Table 25

Percentage Distribution of Time Allocations for Language Arts by Type of School

	1	27979	Percentage Allocating						
G1	rade	Туре	Minimum time or less	Within the suggested range	Maximum time or more				
		I	0.0	78.4	21.6				
		II	2.4	85.4	12.2				
Sever	า	III	5.5	83.6	10.9				
		IV	6.7	75.0	18.3				
	ove	rall	3.9	80.2	15.9				
		I	0.0	0/ 2	1.5 7				
		Т	0.0	84.3	15.7				
		II	2.4	85.4	12.2				
Eight	-	III	9.1	83.6	7.3				
		IV	6.7	73.3	20.0				
	ove	rall	4.8	81.2	14.0				
		I	0.0	84.3	15.7				
		II	2.4	82.9	14.6				
Nine		III	7.3	83.6	9.1				
		IV	6.7	80.0	13.3				
	ovei	call	4.3	82.7	13.0				



Table 26

Percentage Distribution of Time Allocations for Language Arts by Size of School

Marine Paris Control C			Percentage Distrib	ution
Grad	e Size	Minimum time or less	Within the	Maximum time or more
	S	5.6	82.0	12.5
Seven	М	2.9	80.0	17.1
seven	L	3.1	78.5	18.5
ov	verall	3.9	80.2	15.9
	S	6.9	80.6	12.5
74.1	M	4.3	81.4	14.3
Eight	L	3.1	81.5	15.4
ov	verall	4.8	81.2	14.0
	S	5.6	84.7	9.7
Nine	M	2.9	82.9	14.3
Nine	L	4.6	80.0	15.4
ov	verall	4.3	82.7	13.0



feature is that as the size category increases the percentage of schools allocating maximum or more time also increases. Thus larger schools have a greater proportion of schools at or above the maximum suggested time than smaller schools.

Summary

The analyses of time allocations for language arts seem to indicate that administrators more often conformed to the departmental regulations in this subject than in mathematics, science or social studies. An overall percentage of 14.3 percent of the schools allocated maximum or more time for language arts, a much lower percentage than found for the other three subjects.

Schools categorized as junior high schools or in the large category tended to allocate more time to the study of language arts than did other types of schools.

PHYSICAL EDUCATION AND HEALTH

The Department of Education regulations require that physical education and health be offered from 120 to 175 minutes per week.

Type Analysis

The variations in the time allocated to physical education and health in various organizational patterns of schools are outlined in Table 27.

In all categories the mean amount of time allocated to physical education and health fell within the suggested time range.



The grade nine time allocations were much lower than those for grades seven and eight. This may partly be due to the fact that grade nine students also study guidance and the time for this subject may simply be taken from the health allocation. Junior-senior high schools (Type II) and elementary-junior-senior high schools tended to allocate greater amounts of time to physical education and health. Junior high schools (Type I) had the lowest average time allocation of all the types of schools. The differences between the mean time allocations were significant in grade nine only and only between Type I and Type II schools and between Type I and Type IV schools.

Table 27

Instructional Time in Minutes per Week
Allocated to Physical Education
and Health

			Means		Actual	Rang	es
Туре	N	Gr. 7	Gr. 8	Gr. 9		. 8	Gr. 9
I	51	151.0	139.3	123.7	43-257 43	3-257	43-180
II	41	154.3	151.3	144.9	0-200	-200	100-200
III	55	146.0	144.8	135.7	60-240 110	-240	60-240
IV	60	152.7	152.4	147.1	80-240 100	-240	80-240
Signi: diffe: between		none	none	I-II			

The ranges of the time allocations were all considerably in excess of the fifty-five minute departmental suggestion. The



greatest range was 212 minutes while the mean range was 165.9 minutes or three times the suggested range. One school did not allocate any time for physical education and health in either grade seven or grade eight.

Size Analysis

The variations in time allocated to physical education and health in various sizes of schools are outlined in Table 28.

Instructional Time in Minutes per Week
Allocated to Physical Education
and Health

Table 28

			Means		A	ctual Range	S
Size	N	Gr. 7	Gr. 8	Gr. 9	Gr. 7	Gr. 8	Gr. 9
S	72	149.6	149.0	147.6	0-240	0-240	80-240
M	70	153.5	151.5	140.8	105-200	105-200	80-200
L	65	149.4	139.8	124.0	43-257	43-257	43-200
Signi diffe betwe		none	none	S-L			

The results obtained when the schools were categorized by size were also different from those obtained previously. Large schools had the smallest mean time in each grade while medium schools had the largest mean for grades seven and eight. Small schools had the largest mean for grade nine. The only difference between means that was statistically significant was between small



and large schools in grade nine.

It is interesting to note that small schools offer an almost identical mean time allocation for each grade. The mean times in medium schools are very similar for grades seven and eight but drop decidedly in grade nine. The means for large schools changed markedly for each grade.

Distribution of Time Allocations

The percentage distribution of instructional time for physical education and health in various types of schools is outlined in Table 29.

The most notable feature of the time distributions for physical education and health is that more schools allocate at or below the suggested minimum time than allocate the suggested maximum time or more. This would seem to indicate that the suggested range outlined in the departmental regulations was viewed by administrators as more than adequate. There is no particular type of school which appears to have a uniformly greater time emphasis for physical education and health than any other type.

Table 30 describes the variations in the distribution of time allocations for physical education and health in various sizes of schools.

The variations documented in Table 30 reflect the smaller emphasis placed on physical education and health when compared to the other core subjects. Grade nine time allocations appear more



Table 29

Percentage Distribution of Time Allocations for Physical Education and Health by Type of School

			Percentage Allocati	
Grad	е Туре	Minimum time or less	Within the suggested range	Maximum time or more
	I	23.6	52.9	23.6
	II	21.9	61.0	17.1
Seven	III	29.1	60.0	10.9
	IV	25.0	62.3	13.3
0	verall	25.1	59.5	15.4
	I	31.4	54.9	13.7
	II	24.4	61.0	14.6
Eight	III	32.8	56.3	10.9
	IV	25.0	66.7	8.3
יס	verall	28.5	59.9	11.6
	I	43.1	54.9	2.0
	II	46.4	39.0	14.6
line	III	41.8	49.1	9.1
	IV	41.7	46.7	11.7
70	verall	43.0	47.8	9.2

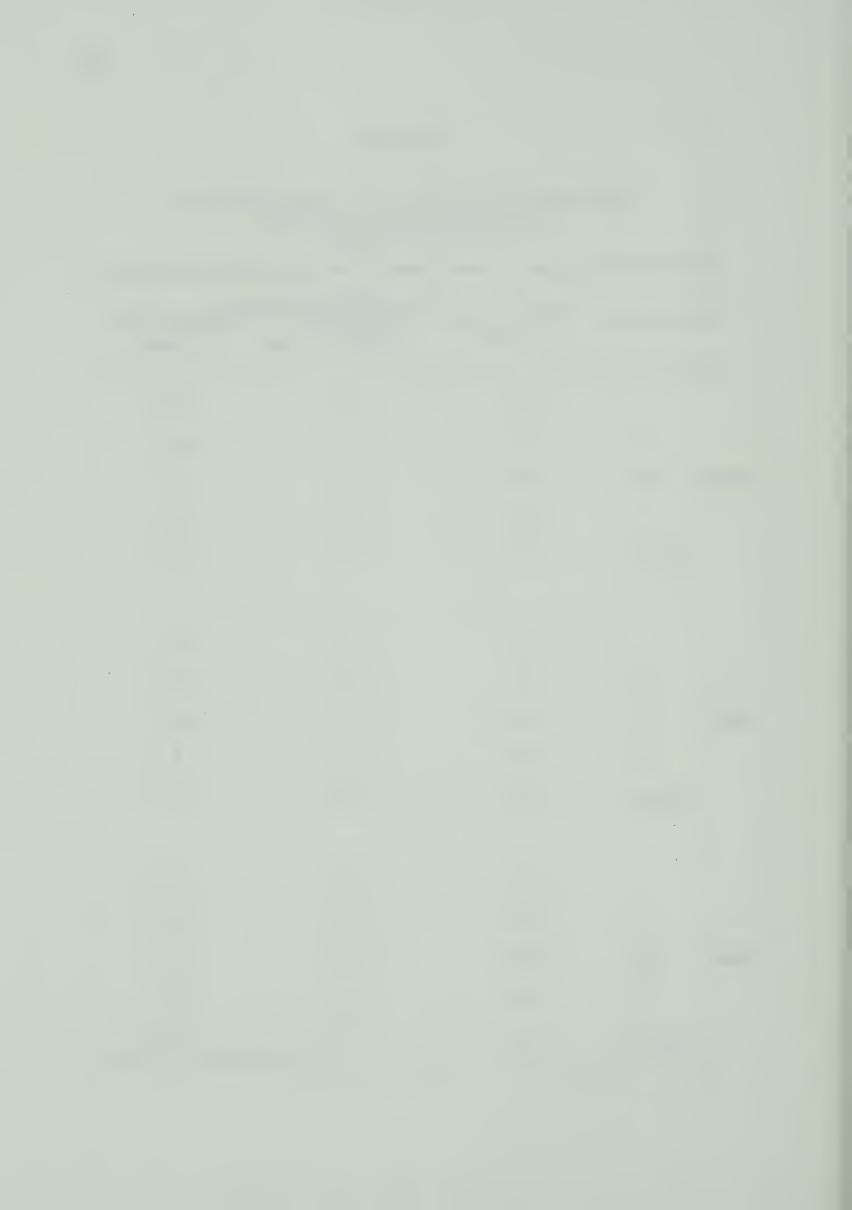


Table 30

Percentage Distribution of Time Allocations for Physical Education and Health by Size of School

Grad	e Size	Minimum time or less	Percentage Allocat Within the suggested range	ing Maximum time or more
	S	25.0	63.9	11.1
Seven	М	27.2	58.5	14.3
seven	L	23.1	55.3	21.6
ove	erall	25.1	59.5	15.4
	S	26.4	63.9	9.7
Eight	M	28.6	58.5	12.8
8116	L	30.8	57.0	12.3
ove	erall	28.5	59.9	11.6
	S	37.5	51.4	11.1
ine	M	44.3	44.3	11.4
1110	L	47.7	47.7	4.6
ove	rall	43.0	47.8	9.2



likely to be at a lower level than grade seven or eight allocations.

There were no major differences in distribution of time allocations between the various sizes of schools.

Summary

The data relating to physical education and health indicate that most administrators found the suggested time allocations for these subjects more than adequate for their needs. An average of 12.1 percent of the schools allocated maximum or more time for physical education and health while 32.2 percent allocated minimum or less time. Large schools or junior high schools tended to allocate less time than did other types of schools.

GUIDANCE

According to departmental regulations group guidance can be offered in grade nine for up to seventy-five minutes per week.

Type and Size Analysis

Since group guidance is offered only to grade nine classes both analyses will be done simultaneously. The variations in time allocated to grade nine group guidance are outlined in Tables 31 and 32.

The mean time allocation for grade nine guidance averages 52.5 minutes per week for the entire sample. Schools combined with a senior high section, Types II and IV, seem to devote somewhat more time to guidance than do other types of schools although these differences are not statistically significant. Large schools

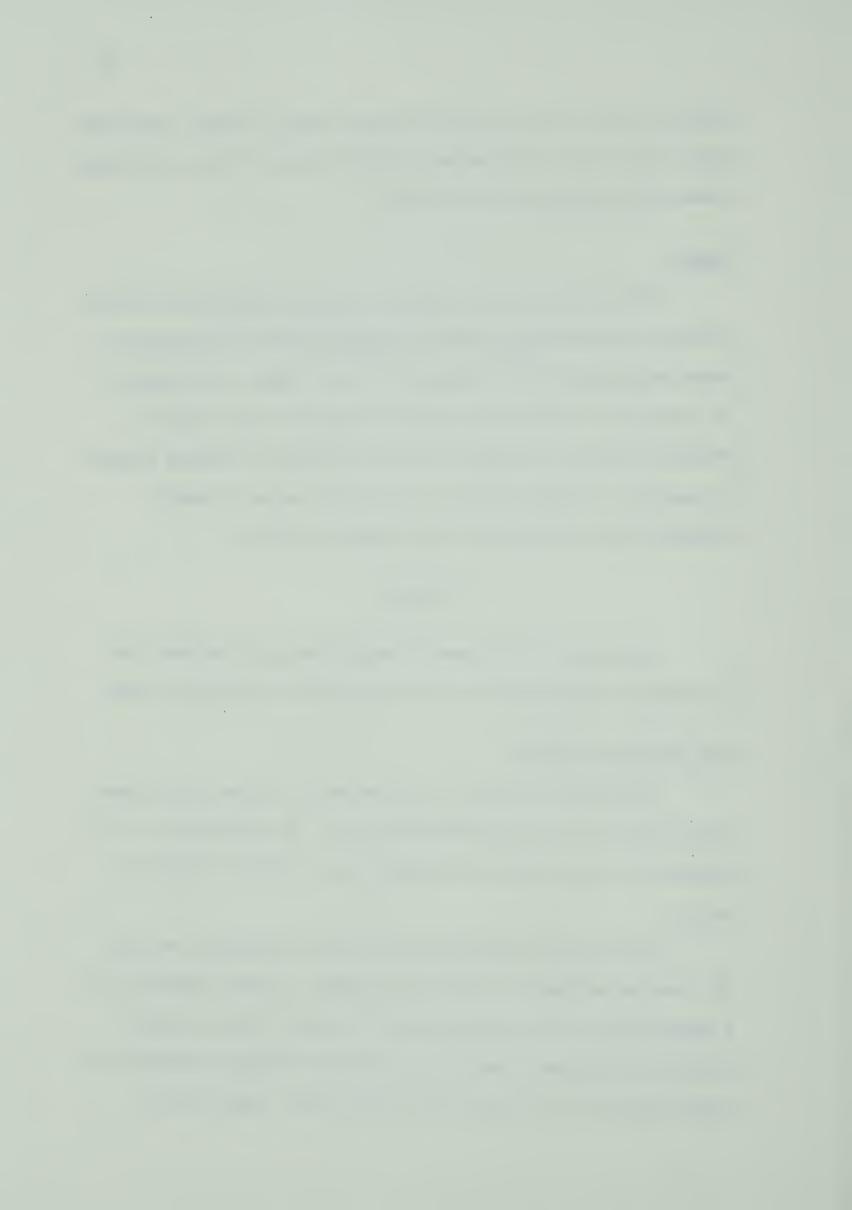


Table 31

Instructional Time in Minutes per Week Allocated to Grade Nine Group Guidance

Туре	N	Mean	Range
I	51	50.2	0- 98
II	41	57.3	0-120
III	55	48.0	0-150
IV	60	55.2	0-160
Signific different between		none	

Table 32

Instructional Time in Minutes per Week Allocated to Grade Nine Group Guidance

Туре	N	Mean	Range	
S	72	55.1	0-160	
М	70	55.6	0-120	
L	65	46.2	0- 98	
Signific different between		S-L M-L		



do offer significantly less time to guidance than do small or medium schools.

There were a total of twelve schools in the sample which allocated no time for guidance. These schools were fairly evenly distributed by both school type and school size. Some schools also offered up to twice the required maximum time for guidance.

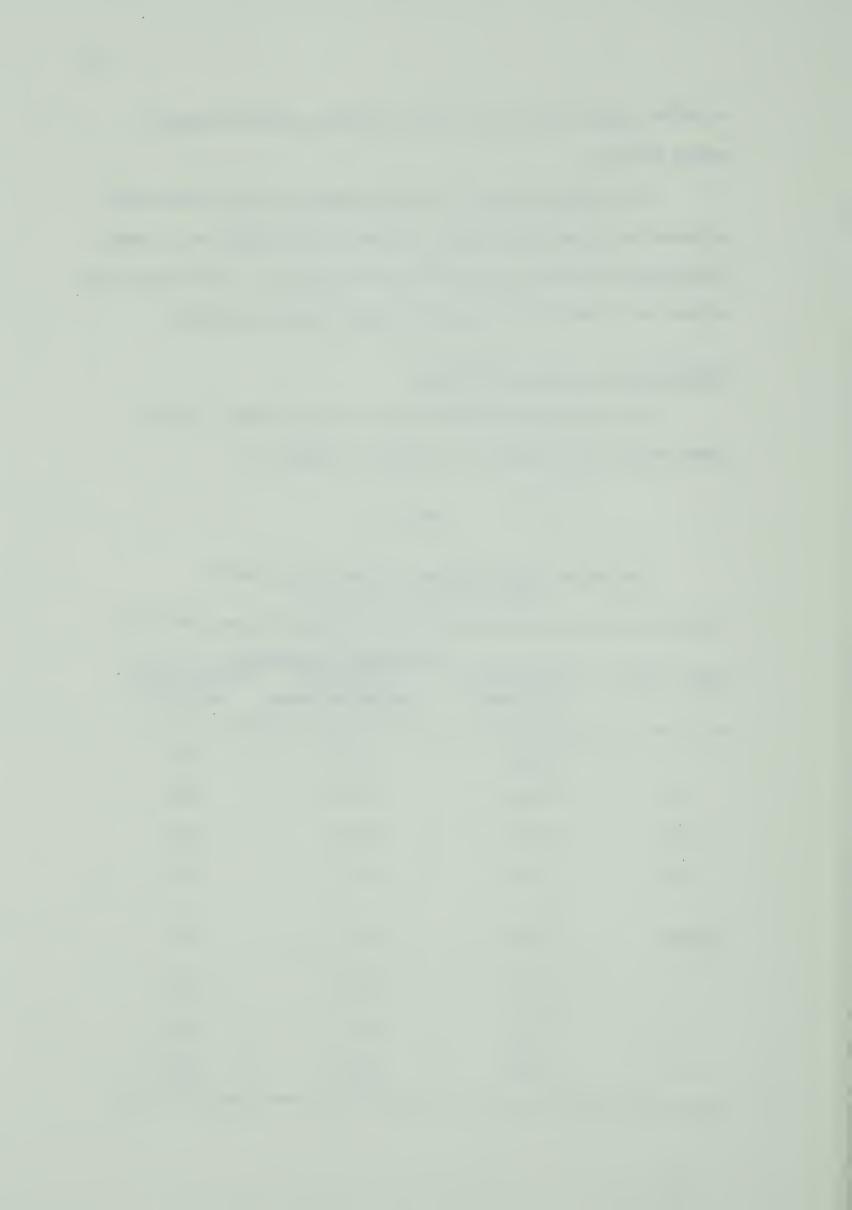
Distribution of Time Allocations

The percentage distribution of instructional time for grade nine group guidance is outlined in Table 33.

Table 33

Percentage Distribution of Time Allocations for Grade Nine Group Guidance

		Percentage Allocat	ing
Type or Size	Minimum time or less	Within the suggested range	
I	39.2	35.3	25.5
II	53.6	12.2	34.2
III	50.9	38.2	10.9
IV	55.0	13.3	31.6
overal1	49.8	25.1	25.1
S	51.4	20.8	27.8
M	44.3	22.9	32.9
L	53.9	32.3	13.8



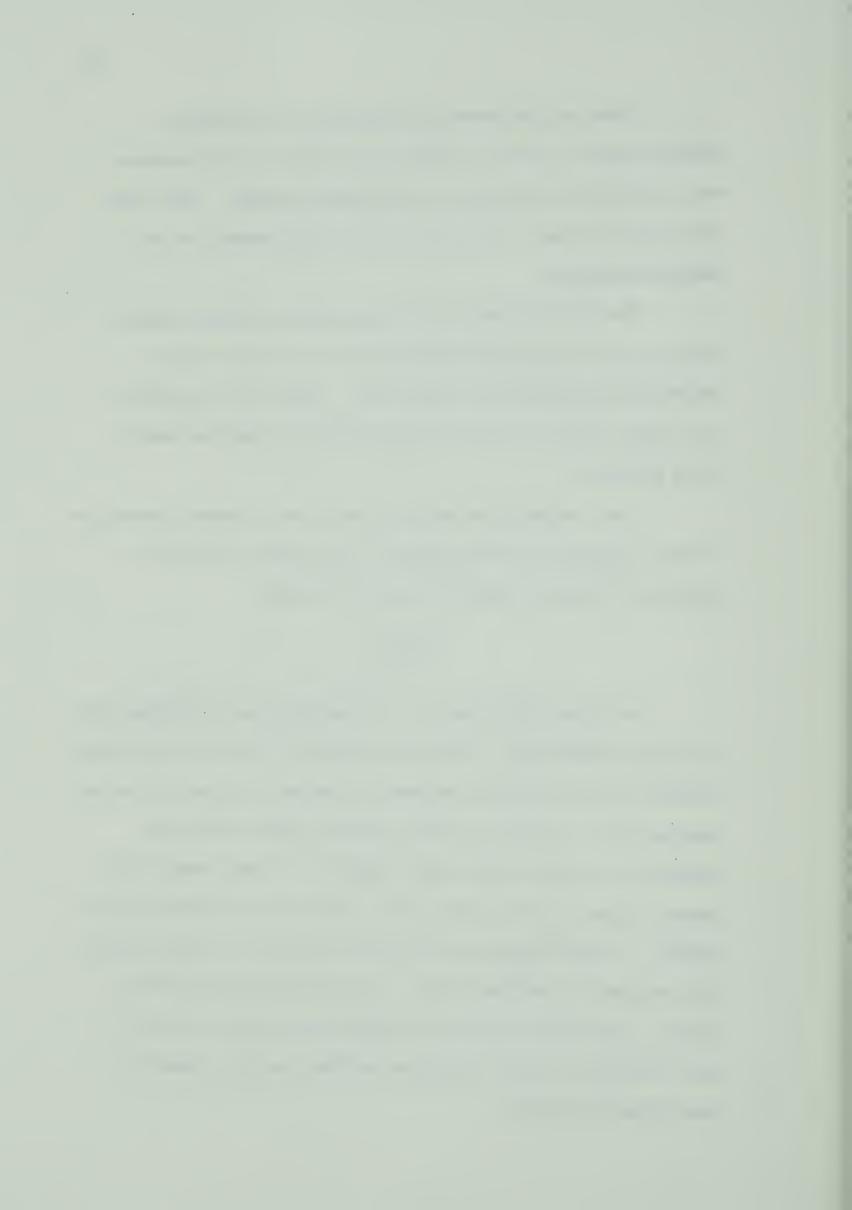
Since the departmental regulations do not state a minimum amount of time for grade nine guidance, forty minutes was arbitrarily selected as an appropriate minimum. This time was selected since it is approximately fifty percent of the suggested maximum.

The distributions of time allocated to guidance seem to indicate that less emphasis was placed in this area than is suggested by departmental regulations. Almost fifty percent of the sample schools allocated forty minutes or less per week to group guidance.

Type I schools and medium schools had a greater proportion of their groups allocating guidance time within or above the suggested range than did other types of schools.

SUMMARY

The time allocations for core subjects can be divided into two major subdivisions. The first consists of the four traditional academic subjects, namely mathematics, science, social studies and language arts. In each of these subjects schools that were organized as junior high schools (Type I) or junior-senior high schools (Type II) allocated greater times than did other types of schools. Large schools also allocated more time to these subjects than did small or medium schools. It would appear that large schools, junior high schools and junior-senior high schools are more oriented to these traditional academic subjects than the other types of schools.



The second major subdivision of the core program consists of physical education and health, and grade nine group guidance. Schools with a senior high section (Types II and IV) allocate more time in these areas than do other types of schools. Small or medium schools also surpass large schools in time allocations in these areas.

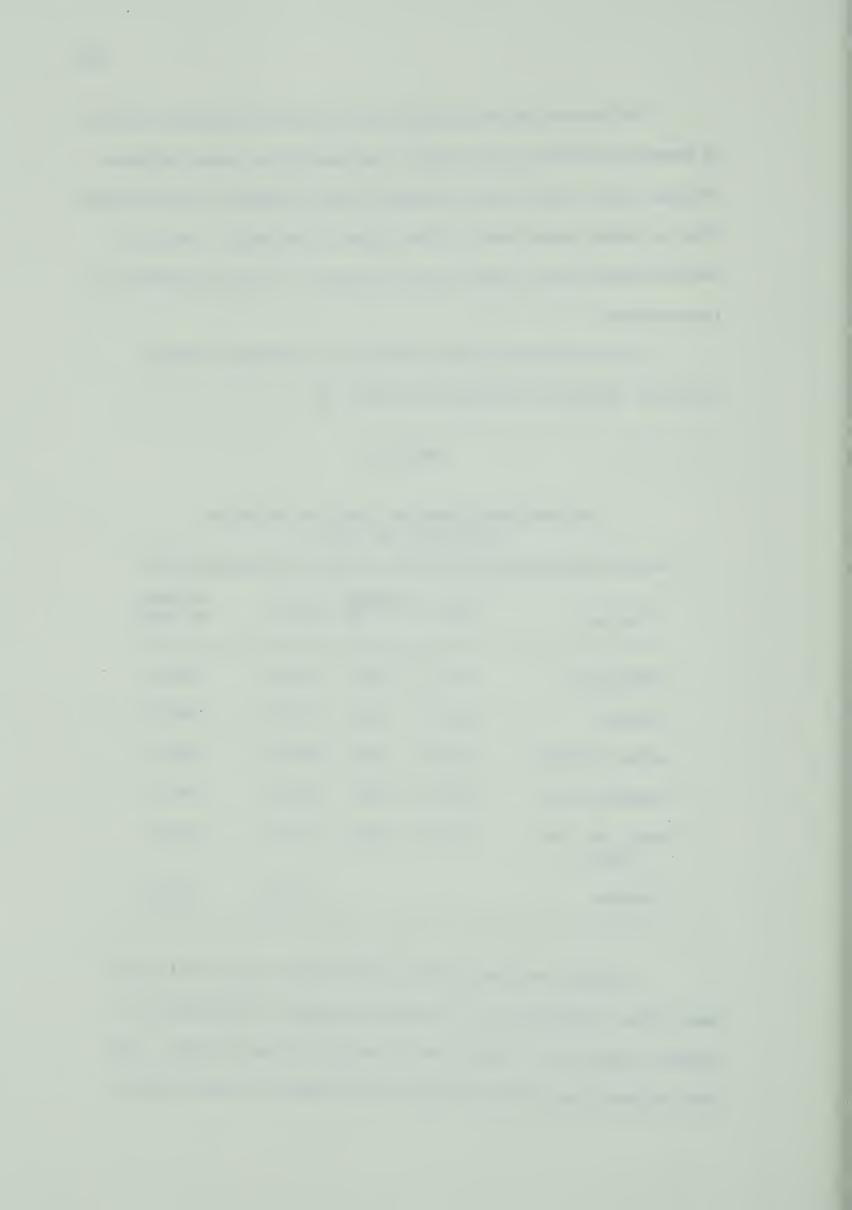
The variations in the various core subjects between different grades are outlined in Table 34.

Table 34

Instructional Time for the Core Subjects in Minutes per Week

Subject	Gr. 7	Means Gr. 8	Gr. 9	Average of Means
Mathematics	187.1	185.4	185.3	185.9
Science	182.6	181.5	181.2	181.8
Social Studies	191.6	191.6	190.7	191.3
Language Arts	305.1	302.1	300.4	302.5
Phys. Ed. and Health	150.8	146.9	137.9	145.2
Guidance			52.5	52.5

Although not tested for significance statistically the mean times allocated for all subjects seemed to decrease as a student progresses through the junior high school grades. The time allocations for mathematics and science are very similar



with social studies receiving slightly more time than these two subjects. Language arts received at least 110 minutes more per week than any other core subject.

The variations of total time allocations in the various core subjects are outlined in Table 35.

Table 35

Percentage Distribution of Core Instruction
Time for all Schools

	Percentage Allocating				
Subject	Minimum time or less	Within the suggested range	Maximum time		
Mathematics	2.1	33.6	64.3		
Science	3.4	39.6	57.0		
Social Studies	2.0	36.4	61.6		
Language Arts	4.4	81.3	14.3		
Phys. Ed. and Health	32.2	55.7	12.1		
Gr. Nine Guidance	49.8	25.1	25.1		

Examination of the distribution of core times would appear to indicate a general feeling that the suggested time allocations for mathematics, science and social studies are inadequate. In each of these subjects maximum or more time was allocated by a majority of the schools. The suggested range for language arts seems to be meeting with fairly wide acceptance. The suggested



allocations for physical education and health would appear to be adequate and there are some indications that the respondents felt that the suggested time for grade nine guidance was more than adequate.



Chapter 5

PERCENTAGE REDUCTION IN CORE TIMES

The 1969 revision of the Alberta junior high school program reduced the suggested times for the various core subjects. These reductions were not uniform but varied considerably from subject to subject. This chapter reports the actual reductions in mean core time for each of the core subjects by comparing the results of Deutscher's research in 1964-65 with the results discussed in chapter four of this document.

MATHEMATICS

Prior to the 1969 revision to the core program the time allocation for mathematics was 150 to 225 minutes per week. The mean of this range was 187.5 minutes. The mean of the current range is 162.5 minutes. This gives a theoretical reduction of twenty-five minutes per week or 13.3 percent. The actual percentage reductions in time allocations for mathematics are outlined in Table 36.

The mean percentage reduction of 11.5 percent is less than the theoretical reduction calculated from the departmental regulations. The percentage reduction in the time allocated to mathematics increases throughout the grades with the grade nine classes having the largest time reduction. It is interesting to



note that the grade nine time allocations were the largest of the three grades in 1964-65 but are now the smallest.

Table 36

Percentage Reduction in Weekly Time Allocations for Mathematics

		Means			
Grade	Deutscher	1964-5 Barnett	1970-1	reduction	
7	010.1	105.1		10.0	
7	210.1	187.1		10.9	
8	209.0	185.4		11.3	
9	211.6	185.3		12.2	
mean	210.2	185.9		11.5	

SCIENCE

Prior to the revisions to the core program the time allocation for science was 150 to 225 minutes per week. The mean of this range was 187.5 minutes. The mean of the current suggested range is 162.5 minutes. This gives a theoretical reduction of twenty-five minutes per week or 13.3 percent. The actual percentage reductions in time allocations for science are outlined in Table 37.

The mean percentage reduction of time allocations for science was less than the theoretical percentage reduction. Once again the percentage reductions increased as the grade level increased. The percentage time reductions for science were less



than those obtained for mathematics.

Table 37

Percentage Reduction in Weekly Time Allocations for Science

		Means		Percentage
Grade	Deutscher	1964-5 Barnett	1970-1	reduction
7	201.2	182.6		9.2
8	201.7	181.5		10.0
9	203.1	181.2		10.9
mean	202.0	181.8		10.0

SOCIAL STUDIES

Prior to the revisions to the junior high school core program the time allocation for social studies was 187.5 to 262.5 minutes per week. The mean of this range was 225 minutes. The mean of the current suggested range is 175 minutes. This gives a theoretical reduction of fifty minutes per week or 22.2 percent. The actual percentage reductions in time allocations for social studies are outlined in Table 38.

The percentage reductions in time allocations for social studies were only half of the theoretical reduction. The trend for higher grades to have the higher percentage reduction was noted once again. The percentage reductions for time allocations for social studies are greater than those for science but not so



great as those for mathematics.

Table 38

Percentage Reduction in Weekly Time Allocations for Social Studies

		Means			
Grade	Deutscher	1964-5 Barnett	1970-1	reduction	
7	212.6	191.6		9.9	
8	213.9	191.6		10.4	
9	215.8	190.7		11.6	
nean	214.1	191.3		10.6	

LANGUAGE ARTS

Prior to the revisions to the core program the language arts program consisted of a language program and a separate literature course. The language course had a suggested range of 187.5 to 262.5 minutes per week and the range for the literature course was 112.5 to 150 minutes per week. Thus if mean times were used for both literature and language, a total of 356.5 minutes per week would be devoted to language arts. The mean of the current suggested range is 287.5 minutes per week. This gives a theoretical reduction in mean time allocations of 69 minutes per week or 19.4 percent. The actual percentage reductions in language arts time allocations are outlined in Table 39.

The percentage reduction in time allocations for language



arts was higher than those found in mathematics, science and social studies. The same general trend to increase the percentage reduction with progression through the grade levels was once again noted. The percentage reductions were considerably less than the theoretical percentage reductions.

Table 39

Percentage Reductions in Weekly Time Allocations for Language Arts

Grade	Deutscher	Means 1964-5 Barnett 1	Percentage .970-1 reduction
7	349.5	305.1	12.8
8	346.6	302.1	12.8
9	348.1	300.4	13.7
mean	348.1	302.5	13.1

PHYSICAL EDUCATION AND HEALTH

The previous junior high school program allocated from seventy-five to 150 minutes per week for physical education.

The mean of this range was 112.5 minutes per week. In addition, health was to be taught for seventy-five minutes per week to arrive at a total time allocation of 187.5 minutes per week.

The mean of the current suggested range for physical education and health is 147.5 minutes per week. This is a reduction of forty minutes per week or 21.4 percent. The actual percentage



reductions in time allocated to health and physical education are outlined in Table 40.

Table 40

Percentage Reductions in Weekly Time Allocations for Physical Education and Health

		Means	Percentage
Grade	Deutscher	1964-5 Barnett 1970-	1 reduction
7	173.2	150.8	12.9
8	170.1	146.9	13.6
9	148.6	137.9	7.2
mean	164.0	145.2	11.5

The percentage reductions for health and physical education are well below the theoretical reduction expected.

A reversal occurs in the percentage reductions in this subject in that the grade nine time allocations were reduced much less than either the grade seven or grade eight allocations.

GUIDANCE

The previous junior high school program recommended that guidance be scheduled for 112.5 to 150 minutes per week. The current regulations suggest a time of up to seventy-five minutes per week. Because of this difference in the regulations no theoretical reduction can be calculated. The mean time allocation



for grade nine guidance obtained by Deutscher in 1964-5 was 68.0 minutes per week. The mean time obtained for this subject in the current study was 52.5 minutes per week. These means give a percentage reduction of 22.8 percent. This percentage reduction was the greatest of any of the core subjects.

SUMMARY

The percentage time reductions in the various core subjects are extremely uniform. Table 41 summarizes these reductions.

Table 41

Percentage of Time Reduction in the Various Core Subjects

Subject	Gr. 7	Gr. 8	Gr. 9	Mean
Mathematics	10.9	11.3	12.2	11.5
Science	9.2	10.0	10.9	10.0
Social Studies	9.9	10.4	11.6	10.6
Language Arts	12.8	12.8	13.7	13.1
Phys. Ed. and Health	12.9	13.6	7.2	11.5
Guidance			22.8	

The percentage reductions generally increased with the grade level. The sole exception to this rule was physical



education and health where the grade nine reduction was considerably less than that found in grades seven or eight.

In grades seven and eight the order of percentage reduction was physical education and health, language arts, mathematics, social studies and science. In grade nine the order of the percentage reductions was guidance, language arts, mathematics, social studies, science and physical education and health.

The major importance of Table 41 is that it illustrates that the responding principals have reduced their core time allocations by approximately equal percentages. Apparently there were few attempts to either follow rigidly the departmental regulations or to decide independently which subjects could afford to lose a greater amount of time. It appears that a near standard proportion was deducted from each core subject.



Chapter 6

LENGTH OF THE INSTRUCTIONAL DAY

As has been previously noted the length of the instructional day is set largely by administrative decision. Factors other than purely educational considerations, such as bus schedules, also influence the length of the instructional day. This chapter deals with the variations in the length of the instructional day by size and by type of school.

Size Analysis

The variations in the length of the instructional day in various sizes of schools are outlined in Table 42.

Length of Instructional Day in Minutes

Table 42

School size	Mean	Range
S	316.3	272-360
М	314.4	2 92-330
L	305.9	266-320
Significant difference between	S-L M-L	

The overall range of instructional time per day was 266



to 360 minutes. Of the 207 responding schools a total of eighteen had an instructional day of less than 300 minutes. Only nine of the responding schools had an instructional day of more than 320 minutes. This means that 180 of the 207 surveyed schools had an instructional day of from 300 to 320 minutes.

Significant differences were found between the mean length of instructional day for small and large schools and also for medium and large schools. Larger schools have a much lower mean length of instructional day than smaller schools. This seems unusual in that larger schools were found to generally allocate more time to the various core subjects than did the other sizes of schools. Therefore the large schools allocated more time for core subjects and yet used a shorter instructional day.

Type Analysis

The analysis of the length of the instructional day related to type of school will be discussed as they currently exist and will then be compared to those found by Deutscher in 1964-5. The variations related to school type are outlined in Table 43.

The four school types appear to fall into two groups when related to the length of the instructional day. Junior high schools (Type I) and elementary-junior high schools (Type III) offer relatively short instructional days when compared with junior-senior high schools (Type II) and elementary-junior-senior high schools (Type IV). The reason for Types II and IV having a longer



instructional day may be the influence of the senior high section in such schools. The large number of significant differences would suggest that the variations in the length of instructional day are related to the type of school organizational pattern.

Table 43

Length of Instructional Day in Minutes

School Type	Mean	Range
I	305.3	266-330
II	318.5	280-360
III	309.1	280-330
IV	317.3	272-330
overall	312.4	266-360
Significant difference between		I-II I-IV

Change in Length of Instructional Day

Deutscher's study analyzed times only by school type. To enable comparison, this section deals with changes in the length of instructional day by school type only. These changes are outlined in Table 44.

The major significance of Table 44 is that in spite of expanded curriculum requirements the length of the junior high school instructional day in Alberta has generally decreased. The sole exception to this trend were the elementary-junior high schools



(Type III) which recorded a modest 1.9 percent increase in the mean length of the instructional day. Junior-senior high schools (Type II) had the greatest decrease in the mean length of instructional day.

Types I and IV also decreased but to a smaller extent.

Table 44

Changes in the Length of the Instructional Day in Minutes

School		Mear	ns		Amount of	Percentage
type	Deutscher	1964-5	Barnett	1970-1	change	change
I	313.7		305.3		8.4	2.7
II	334.0		318.5		15.5	4.6
III	303.4		309.1		5.7 *	1.9 *
IV	323.2		317.3		5.9	1.8
overall	317.5		312.4		5.1	1.6

^{*} represents increase; all remaining figures are decreases

Summary

The mean length of instructional day for the 207 sample schools was 312.4 minutes. Type II and IV schools as well as schools in the small category tended to use the longest instructional day.

Significant differences between the mean lengths of instructional day for both school size and school type suggest that both of these factors are closely related to the length of the instructional day. Over the last six years the mean instructional day has decreased 5.1 minutes or 1.6 percent.



Chapter 7

STUDY PERIODS

Study periods, for the purpose of this study, are defined as periods when no specific subject is scheduled. Departmental regulations do not require that study periods be scheduled in the junior high schools, thus the decision to schedule study periods may be made by the principal. The purpose of study periods varies from school to school. Some schools utilize study periods to allow pupils to have the opportunity to work independently. Other respondents indicated that they were used as library periods in which research or recreational reading could be done. However study periods may also be used as devices of administrative expediency. Some responses suggest that they are used to eliminate conflicts in the school schedule and not for a definite educational objective.

Slightly less than one-half of the schools surveyed scheduled study periods in each of the junior high school grades. The amount of time devoted per week to study periods in these schools ranged from twenty-eight to 400 minutes.

Size Analysis

The variations in the percentage of schools, classified by size, scheduling study periods and the amount of time they devote to study periods are outlined in Table 45.



Variations in the Incidence and the Mean Time Devoted to Study Periods in Various Sizes of Schools

Size	N	stu	age scho dy perio	ods	stu	cime devo	ods
S	72	55.6	55.6	59.6	86.2	83.6	79.4
M	70	51.4	54.3	55.8	84.2	92.1	90.0
L	65	27.7	27.7	23.0	71.5	73.1	62.7

From the above table it is obvious that the scheduling of study periods was largely a phenomenon associated with schools of 300 students or less. In the small and medium categories well over half of the schools scheduled study periods and the proportion of schools scheduling study periods generally increased through the grades. On the other hand, large schools scheduled study periods in only about one-quarter of the schools and grade nine classes less frequently were scheduled to have study periods than were other grades.

The mean lengths of study periods show very little variation between grades within a particular size category. The large schools which scheduled study periods offered less time than did the smaller schools.

In the sixty-five large schools not only do fewer schools offer study periods but those that do allocate less time than do small or medium schools. This difference partly accounts for the



shorter instructional day found in large schools. Since only a few of the large schools schedule study periods and the ones scheduled are relatively short, the mean school instructional day can be decreased in length.

Type Analysis

The variations in the percentage of schools, classified by type, scheduling study periods and the time they schedule for such periods are outlined in Table 46.

Variations in the Incidence and the Mean Time Devoted to Study Periods in Various Types of Schools

Туре	N	st	itage sch udy peri Gr. 8	Lods	stu	ime devo	ods
I	51	29.4	33.3	29.4	60.7	66.5	61.3
II	41	56.1	58.5	61.0	88.7	100.8	93.7
III	55	40.0	38.2	36.4	71.5	74.1	67.5
IV	60	56.7	56.7	61.7	94.9	89.6	88.3
Total	207	45.4	46.3	46.8	82.5	85.0	81.1

Once again Type II and Type IV schools had extremely similar figures for the percentage scheduling study periods. This same factor was noted previously regarding the length of the instructional day and may be related to having a senior high section in the school. A smaller percentage of Type III schools



scheduled study periods than either Type II or Type IV schools.

Type I schools had the smallest percentage of schools scheduling study periods.

Mean lengths of study periods varied only slightly between the grades in the various school types. Grade eight classes tended to have a greater amount of time allocated to study periods than did either grade seven or grade nine.

Type I schools had a much lower mean time allocation than any of the other types of schools. In this type there were fewer schools scheduling study periods and those that did schedule such periods allocated less time than did other types of schools.

Changes in Incidence and Time Devoted to Study Periods

In Deutscher's study, study periods were also analyzed from the viewpoint of what percentage of the schools scheduled them and the mean lengths of time assigned. A comparison of his findings and the findings of the current research are outlined in Table 47.

In all school types, except Type II, the percentage of schools scheduling study periods has decreased. The overall percentage reduction was approximately five percent. Type IV schools had the greatest decrease in the percentage of schools scheduling study periods.

The mean length of study period time allocations has also changed with Type I schools showing a decrease of over fifty minutes per week in this category. Type II and Type III schools had a slight increase in the mean amount of time devoted to study periods, while Type IV schools had a slight decrease in mean time allocations.



Comparison of the Incidence of Study Periods and Mean Time Devoted to Study Periods between 1964-5 and 1970-1

Table 47

School	Percentage so	riods	Mean time study p	devoted to
type	Deutscher 1964-5	Barnett 1970-1	Deutscher	Barnett
I	34.9	30.7	105.7	62.8
II	57.2	58.5	90.7	94.4
III	41.5	38.2	66.0	71.0
IV	65.2	58.4	98.3	90.9
total	51.0	46.2	88.2	82.9

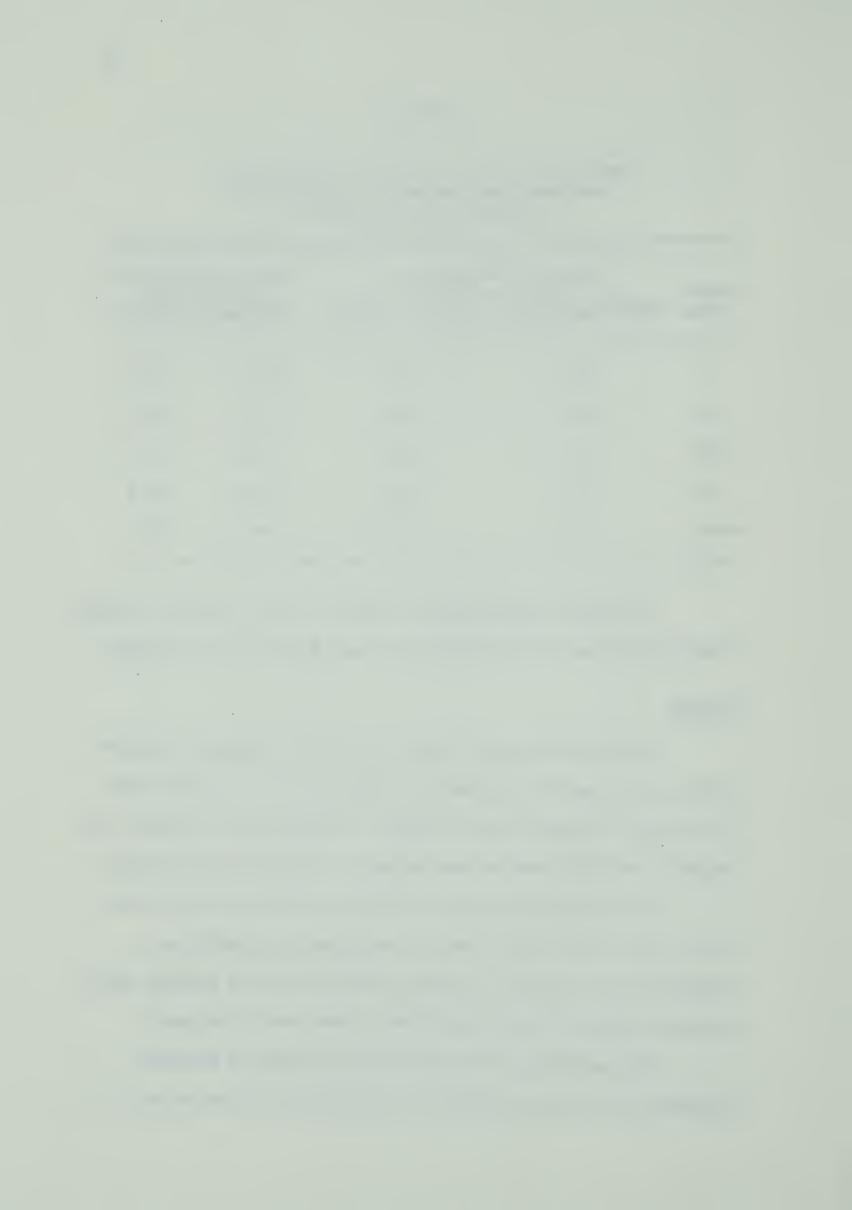
The general trend appears to be for fewer schools to provide study periods and for less time to be scheduled for such periods.

Summary

Study periods were found to occur most commonly in schools which were categorized as small or medium in size or were of Type II or Type IV organizational patterns. These types of schools also tended to schedule greater mean amounts of time for study periods.

In comparing Deutscher's results with the results of this study it was noted that a smaller percentage of schools were scheduling study periods and those schools which did schedule such periods usually allocated less time to them than in the past.

One possible explanation for the decrease in both the incidence and the time devoted to study periods is the use of



newer scheduling and instructional methods. It is possible that more time is devoted to independent study in the core subjects and hence the need for free periods in the timetable has decreased.



Chapter 8

OPTION TIME ALLOCATIONS

The total amount of time devoted to the study of options is not specified by departmental regulations, however both the 'A' options and the 'B' options have suggested time ranges. By calculations using these ranges an approximate total time range of from 345 to 700 minutes per week was obtained. In discussion with the provincial Director of Curriculum, Dr. Hrabi, it was stated that the basic expectation was that students would spend one-third of their school week in the study of options. With the mean instructional time being 312.4 minutes per day or 1562 minutes per week this would mean that students should spend 520.7 minutes per week in the study of options.

In this chapter the 'A' option time allocations and the 'B' option time allocations will both be analyzed. The total amount of time devoted to the study of options will also be analyzed.

ANALYSES OF TIME ALLOCATIONS FOR 'A' OPTIONS

The variations in time allocations for 'A' options are outlined in Table 48.

The departmental regulations suggest that 'A' options should be offered from 120 to 175 minutes per week. The mean time allocations for 'A' options in all schools were very close to the minimum of the suggested range. The variations between the means



were very slight when related to school size. Classification by type of school produced more differences between the means but none of these were found to be significant.

Table 48

Variations in Means and Ranges of Time Allocations for 'A' Options

Classif	ication	N	Means	Actual Rang	ges
Type:	I	51	124.2	91 - 165	
	II	41	119.5	80 - 160	
	III	55	121.9	63 - 160	
	IV	60	128.6	92 - 200	
Size:	S	72	124.8	63 - 193	
	М	70	124.2	87 - 200	
	L	65	122.7	91 - 166	
overal1		207	123.9	63 - 200	
Signifi different between	nce		none		

When the ranges of the time allocations for 'A' options were examined one feature noted was that each minimum time was well below the suggested minimum of 120 minutes per week. The maximum suggested limit of 175 minutes per week was also occasionally exceeded.



ANALYSES OF TIME ALLOCATIONS FOR 'B' OPTIONS

The variations in time allocations for 'B' options are outlined in Table 49.

Table 49

Variations in Means and Ranges of Time Allocations for 'B' Options

Classif	ication	N	Means	Actual Ranges
Type:	I	51	113.4	70 - 165
	II	41	102.0	80 - 160
	III	55	99.1	45 - 165
	IV	60	108.3	70 - 200
Size:	S	72	103.0	45 - 160
	M	70	105.1	70 - 200
	L	65	109.8	70 - 165
overall		207	105.9	45 - 200
Signific different between	nce		I-III	

The departmental regulations suggest that the time allocation for each 'B' option should be from 75 to 175 minutes per week.

The overall mean time allocation for 'B' options was thirty minutes per week above the suggested minimum of the



departmental range. The size section of Table 48 seems to suggest that there was a tendency for larger schools to allocate slightly more time for a 'B' option than smaller schools.

When schools were classified by organizational type a significant difference was found between Type I and Type III schools. Type II and Type IV schools were very close to the overall mean of the 'B' option time allocations.

The ranges of time allocation showed general conformity to the suggested range. The maximum suggested time was seldom exceeded. In most cases the minimum times were not adhered to but generally the mean time allocation was short by only five minutes. The school which allocated the average time of forty-five minutes per 'B' option was fairly unique as it was a small rural school with only eighty-one junior high school students. The next lowest mean in the two categories containing this school was also seventy minutes per week.

The differences between the 'A' options and the 'B' options would appear to be consistent with the suggested allocations. 'A' options received from ten to twenty-two minutes per week more than did 'B' options. 'B' options generally also had lower minimums in the ranges of their means than did 'A' options.

TOTAL OPTION TIME ALLOCATIONS

This section will deal with the mean total option time allocated in different grades of the various categories of schools.

Percentage of time devoted to the study of options will also be



studied.

Type Analysis

The variations that existed in total option time allocations for various types of schools are outlined in Table 50.

Mean Number of Minutes per Week Allocated to Options in Various Types of Schools

		Me	eans	
Туре	Gr. 7	Gr. 8	Gr. 9	overall
I	437.2	461.4	461.7	453.4
II	446.3	447.8	450.5	448.2
III	449.0	450.1	449.6	449.6
IA	476.3	480.0	474.5	476.9
erall	453.3	461.1	460.0	458.2
Significa differenc between		none	none	
Ranges	240-720	280-720	250-760	240-760

The overall means for total option time allocations were closely related in grades eight and nine with these grades spending slightly more time in the study of options than did grade seven classes. Type IV schools schedule more time for the study of options in each grade than did any other type of school.

In three of the four organizational patterns grade eight classes had the greatest amount of time devoted to the study of



options.

The range of the total time devoted to options in all grades was at least 440 minutes. The extremes of each of the ranges were not unique in that there were other instances of schools allocating close to these extremes. The ranges were so varied that some schools spent as little as 15.4 percent of their school week in the study of options while others spent 48.6 percent of their school week on options.

Size Analysis

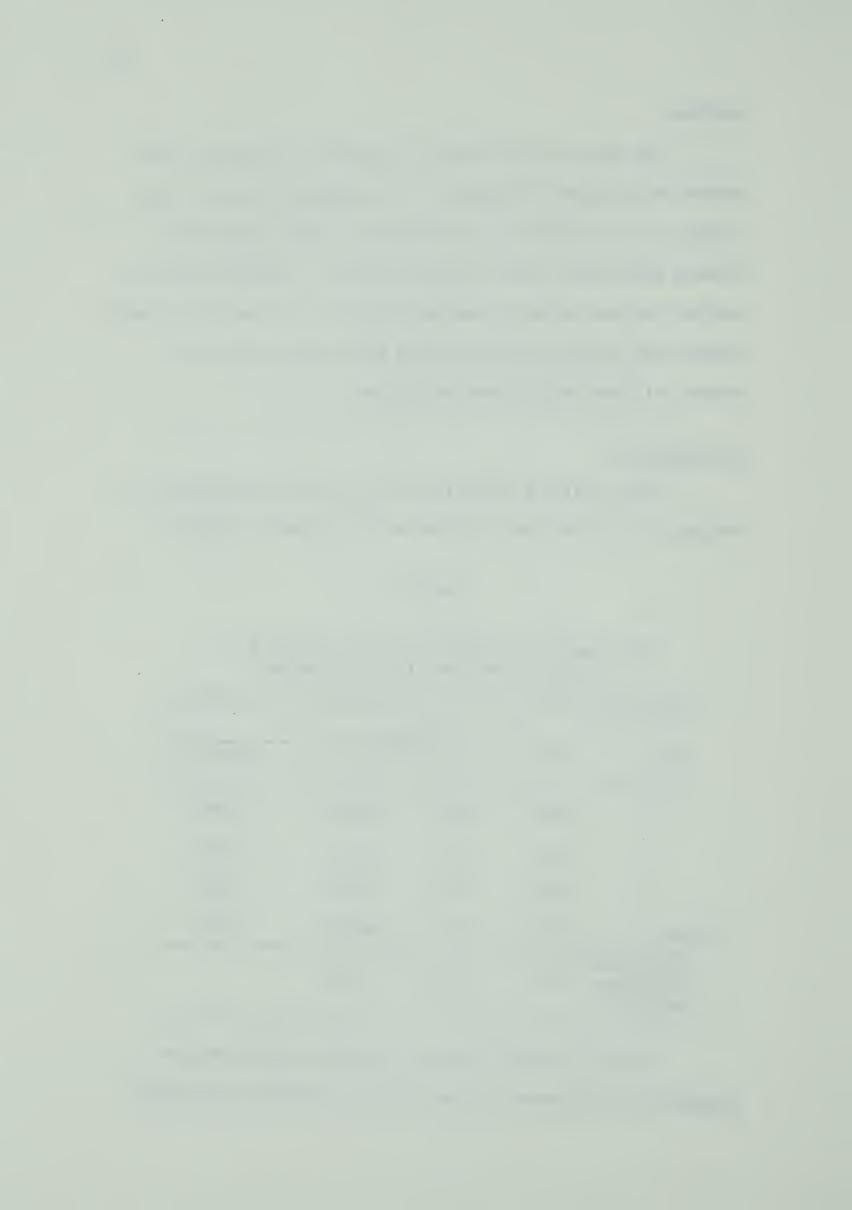
The variations that exist in total time allocations for options in various sizes of schools are outlined in Table 51.

Table 51

Mean Number of Minutes per Week Allocated to Options in Various Sizes of Schools

Means						
Size	Gr. 7	Gr. 8	Gr. 9	overall		
S	468.5	470.5	469.0	469.3		
M	459.7	459.7	460.0	459.9		
. L	430.2	452.2	450.0	444.1		
verall	453.5	461.1	460.0	458.2		
Significant difference between	S-L	none	none			

The most notable feature of the above table was the reduction in the amount of time devoted to options as the size



categories became larger. This general trend to decrease the total amount of option time was found to be significant only between the small and large schools in grade seven. Large schools had a mean total option time allocation of twenty-five minutes per week less than small schools and fifteen minutes per week less than medium schools. This helps to explain how large schools can offer more time in the core program and yet have a shorter school day. By scheduling less time for options and using less time for study periods the school day can be shortened without decreasing the time allocations for core subjects.

PERCENTAGE OF SCHOOL WEEK SPENT IN THE STUDY OF OPTIONS

As was stated in the introduction to this chapter, one of the basic objectives of the new junior high school program was to allow students to spend 33.3 percent of their school time in the study of options. By using the data from Tables 42 and 43 dealing with the length of the instructional day and Tables 50 and 51 dealing with the total option time allocated, percentages of weekly time devoted to options were calculated. These results are summarized in Table 52.

The first feature illustrated in Table 52 is that in no case was the 33 percent level reached. This is not to be considered as failure of the program however. All of the percentages were fairly close to the thirty-three percent level which can in itself be considered a success since this is only the second year of the



program.

Table 52

Percentage of the School Week Devoted to the Study of Options

		Percentage		
Category	Gr. 7	Gr. 8	Gr. 9	Mean
Type: I	28.6	30.2	30.2	29.7
II	28.0	28.1	28.2	28.1
III	29.0	29.1	29.0	29.0
IV	30.0	30.2	29.9	30.0
S	29.6	29.8	29.6	29.7
M	29.2	29.2	29.2	29.2
L	28.2	29.6	29.5	29.1
overal1	29.0	29.5	29.4	29.3

The percentage of the school week spent in the study of options was extremely uniform throughout the junior high school grades of each of the school categories. The only school categories with wide variations between the grades were Type I and large schools and in these cases this variation was found only between grades eight and seven.

The percentages were also fairly uniform if viewed as percentages in a particular grade of different categories of schools.



That is, most of the categories have fairly equal percentages for each of the grades.

Grade seven classes received a slightly smaller percentage of the instructional week for the study of options than did grade eight or nine classes.

Schools categorized as Type I, Type IV or small generally devoted a greater percentage of the school week to the study of options while Type II and Type III schools generally allocated a smaller percentage of the school week to the study of options.

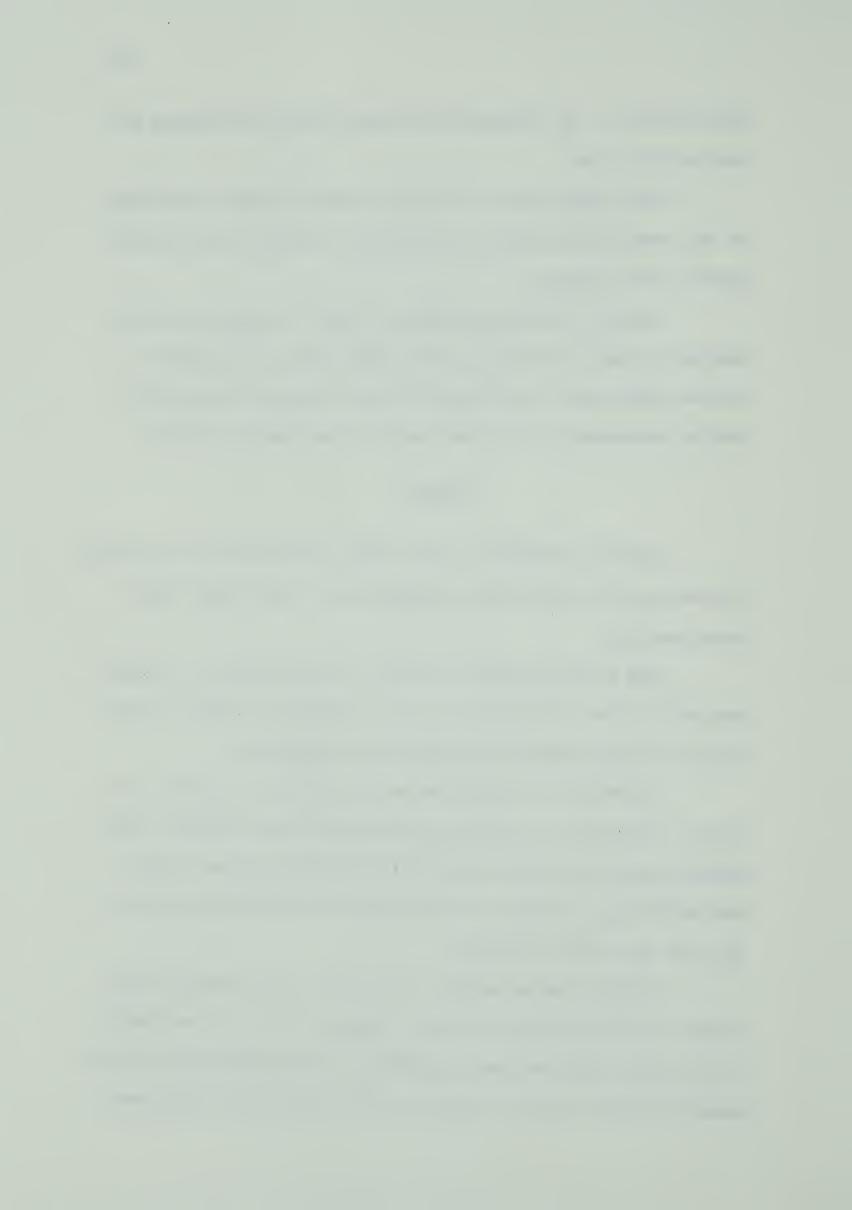
SUMMARY

The data presented in this chapter indicated that the option program has been fairly well accepted by the junior high school administrators.

Mean time allocations for both 'A' options and 'B' options were well within the suggested range, although the ranges for both types of options generally exceeded those suggested.

The number of minutes per week allocated to options in the various categories of schools had an overall mean of 458.2. Small schools and Type IV schools generally scheduled the most option time with Type II schools and large schools scheduling the least time for the study of options.

Although the percentage of the school week devoted to the study of options did not reach the suggested level, the uniformity of the percentages and their proximity to the suggested level would seem to indicate that the program has met with general acceptance.



Chapter 9

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

SUMMARY

The main purpose of this study was to investigate the variations that existed in the time allocations for the Alberta junior high school core subjects and to compare these results with those found by Deutscher in 1964-5.

The data required for the study were collected by a questionnaire distributed to 300 school principals. The 207 responses were used to classify the schools on the basis of both size and organizational pattern.

The data from the questionnaires were analyzed by computer to find the means of the time allocations for the various core subjects in each of the school categories as well as for the length of the instructional day and option time allocations. Scheffé tests for significant differences between the various means were performed for each variable.

The time allocations for each core subject were found to decrease as the grade level increased. This was particularly notable in physical education and health.

The mean science and mathematics time allocations were closely related with junior high schools (Type I) and large schools allocating more time for these subjects than other categories of



schools. In both of these subjects the overall mean of the time allocations exceeded the suggested maximum time allocation and a majority of principals allocated the maximum suggested time, or more, to their study.

The mean time allocation for social studies was within the suggested range, although a majority of principals allocated maximum, or more, time to social studies. Junior-senior high schools (Type II) and large schools had the greatest mean time allocations for social studies.

In language arts the junior high schools (Type I) and large schools had the highest mean time allocations. Over eighty percent of the responding schools allocated time for language arts within the suggested range. This finding was very different from the situation in mathematics, science and social studies.

Medium schools and schools with a senior high section

(Types II and IV) had the greatest mean time allocations for

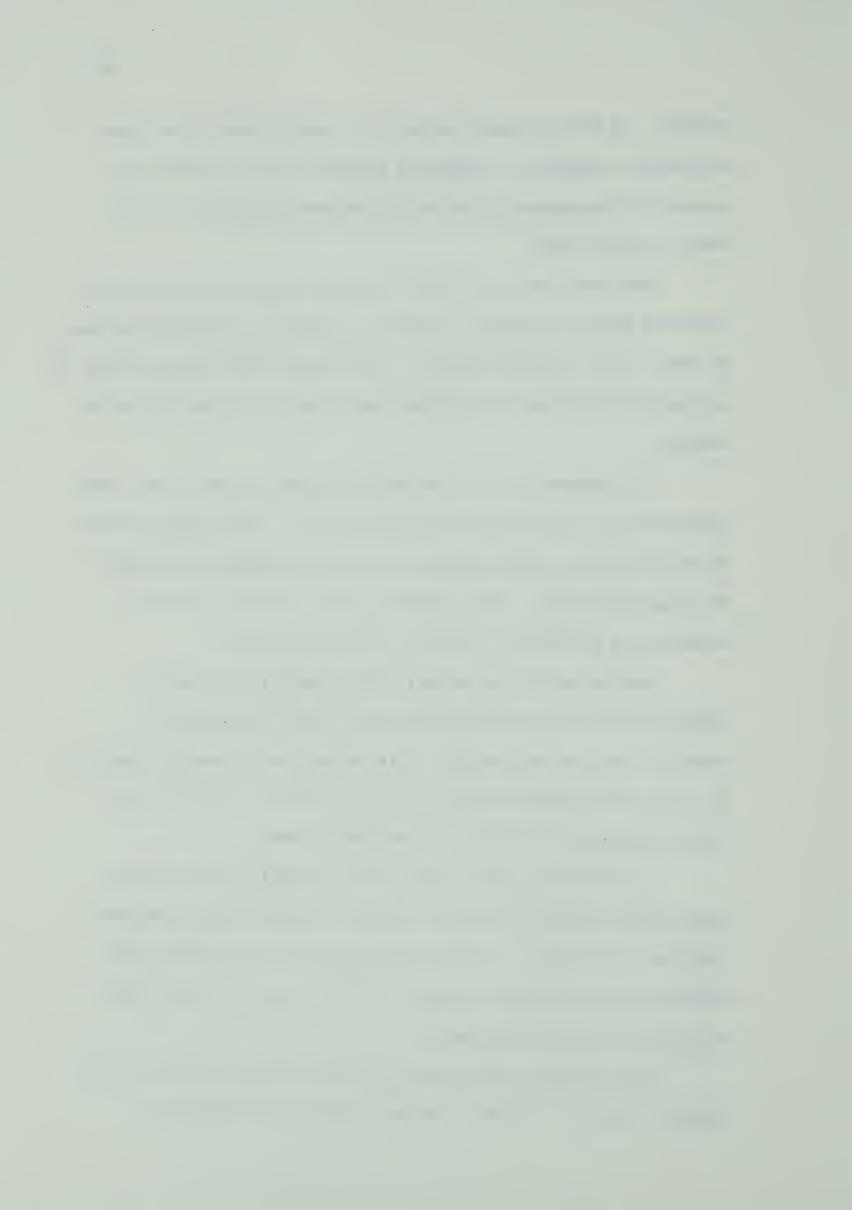
physical education and health. This subject had a greater proportion

of cases where minimum or less time was allocated. Most of the

time allocations fell within the suggested range.

In time allocations for guidance, schools with a senior high section and small schools or medium schools offered the most time for this subject. Almost half of the surveyed schools used minimum or less time for guidance. Twelve schools in the sample allocated no time for guidance.

The percentage reductions in time allocations for the core subjects were very uniform. The only subject which departed



considerably from the norm was grade nine guidance which had a 22.8 percent reduction in time allocation. The remaining subjects varied from a 10.0 percent to a 13.1 percent reduction. This suggests that most principals reduced their core times by an approximately equal percentage.

The mean length of the instructional day in the surveyed schools was 312.4 minutes. Small and medium schools as well as Type II and Type IV schools scheduled longer instructional days than did other categories of schools. The school day has decreased slightly in length when compared with Deutscher's results.

Study periods were scheduled in 46.2 percent of the schools surveyed. Those schools scheduling study periods allocated a mean time of 82.9 minutes per week for their use. Study periods were used less often in large schools, junior high schools (Type I) and elementary-junior high schools (Type III) than in other categories of schools. Both the incidence and the mean time devoted to study periods have decreased since Deutscher's study.

The results obtained by the analyses of time allocations for options suggest that the option program has been fairly well accepted by school administrators. The expected proportion of one-third of the school week devoted to options has not been reached in any classification of schools but the results put the proportion of option time fairly close to this level. Small schools and elementary-junior-senior high schools (Type IV) generally scheduled more time for options than did other categories of schools.



CONCLUSIONS

A total of sixteen significant differences between means for the various core subjects in the different sizes of schools were obtained. In the core subjects large schools offer significantly more time than small or medium schools in a total of thirteen of the thirty possible comparisons.

When categorized by type, only six significant differences were obtained. It would seem safe to conclude that the size of a school has a greater bearing on the core time allocations than does the organizational pattern.

It would appear from a study of the mean time allocations and their distribution that the Department of Education should consider some adjustment to the suggested time allocations in mathematics, science and social studies. Since a majority of the school principals surveyed felt a need to allocate maximum time or more in these subjects it would seem that the current program of studies is viewed as too extensive to be handled in the time suggested. Therefore either time allocations should be extended or the program of studies revised.

The percentage reductions in core time allocations suggest that administrators did not follow closely the theoretical reductions outlined in the Junior High School Handbook. By using a fairly uniform percentage reduction the somewhat inequitable reductions have been avoided.

The length of the instructional day has been slightly shortened over the last six years. It would appear that no major



efforts have been put forth to comply with the recommendations of the Cameron Commission in this respect. This factor is particularly important when it is noted that the schools with shorter instructional days are generally also those with less time devoted to the option program.

The option program must be considered a success from the standpoint of time allocations. It appears that school administrators have accepted the opportunity to extend the range of options offered to their students.

RECOMMENDATIONS

General

- 1. It is recommended that the Department of Education consider the possibility of lengthening the required school instructional day to at least 320, and preferably 330, minutes.
- 2. In view of the findings that a majority of schools allocate maximum or more time to mathematics, science and social studies; it is recommended that the Department of Education consider the possibility of extending the suggested time range for these subjects or revising the current programs to make them more suitable for the current suggested range.
- 3. The relative merits of the various organizational patterns of schools should be assessed from standpoints other than the amount of time they allocate to core subjects. On the basis of this study, few advantages can be found to justify the existence of the elementary-junior high school organizational pattern.



4. Schools should make an effort to adjust their time allocations so as to devote one-third of their school week to the study of options.

Research

- 1. Since study periods are used in almost half of the surveyed schools they should be studied to determine why administrators use them and what use pupils make of them.
- 2. This study intentionally excluded very small schools from the sample. A study could be undertaken to determine where they would fit in the overall range of time allocations.
- 3. A study could be undertaken to examine the use of semestering in the Alberta junior high schools.
- 4. The use of a wide range of options complicates the scheduling process in the school. This should be studied to determine to what extent innovations, such as cross-grading and flexible scheduling, are used. A study dealing with the practical procedures of effective scheduling would have great utility.
- 5. A study could be undertaken to compare the achievement of students in various subjects under different time allocations.

 Perhaps the amount of time scheduled for a particular subject does not make much difference as far as pupil achievement is concerned.
- 6. A study could be undertaken to compare the time allocations for core subjects between urban and rural areas.
- 7. The academic options should be studied to determine how they are being used. If they are only extensions of the related



core subjects the time allocations for these core subjects may now actually be greater than before the revisions to the junior high school program.

8. A comparison between time allocations in public schools and separate schools could be undertaken to determine what differences exist.

EPILOGUE

The findings of this research would seem to indicate that school administrators view departmental time allocation regulations as guidelines only. There appears to be no reluctance on the part of the administrators to adjust the suggested time allocations so that they better suit the needs of the students. This would indicate increasing administrative concern for the educational welfare of the individual student.

The general acceptance of the expanded option program in the junior high schools also indicates administrative acceptance of the unique role of the junior high school. By providing a wide range of options the school can allow the student to explore his interests and abilities, and assist in directing vocational decisions. In this way the junior high school serves as a link between the elementary and senior high schools and fulfils a vital role in the student's educational experience.







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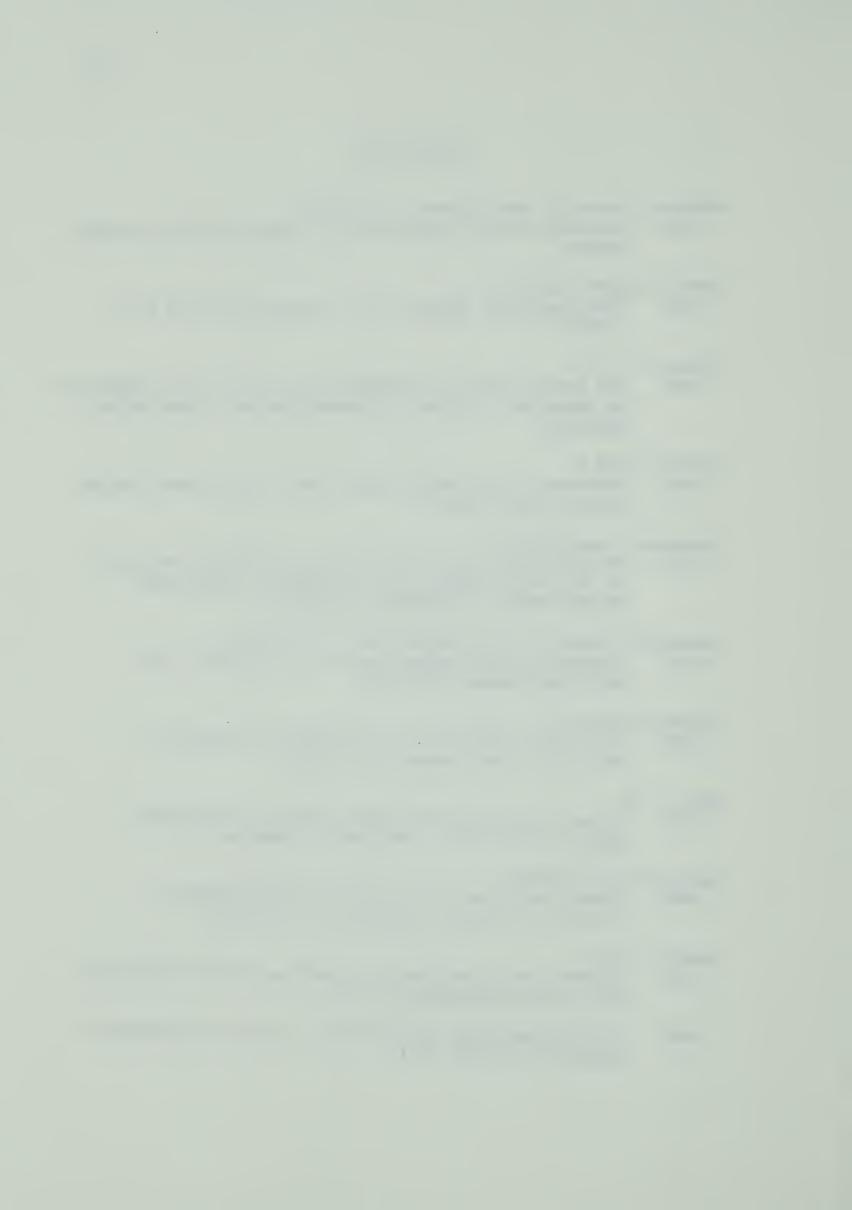
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APPENDIX A

Questionnaire and
Related Documents



JUNIOR HIGH SCHOOLS OF ALBERTA

QUESTIONNAIRE FOR ADMINISTRATORS

General Instructions

- 1. This questionnaire can be self-administered. Each item contains all necessary information and instructions.
- 2. Read ALL instructions carefully.
- 3. Answer ALL questions in parts I and II accurately. Your name and the name of your school will be kept in strict confidence.
- 4. Write your responses to the items directly in the booklet.
- 5. When you are finished, kindly insert the completed questionnaire into the provided, self-addressed, stamped envelope and return to us by mail.
- 6. Thank-you in advance. Please begin . . .
 - D. Barnett, W. Sawatzky
 Graduate Students
 Educational Administration
 University of Alberta
 Edmonton.



Ι.	DESCRIPTION and CLASSIFICATION	TTT.
Α,	. Your school can best be described as (Check one): having junior high school grades only	
	having junior and senior high school grades only	
	having elementary and junior high school grades only	
	having elementary, junior and senior high school grades .	
В	3. Fill in the following chart regarding enrolment in your school as of Septembe	r 30, 1970.
	Grade Number of Classes Total Enrolment	
	VII	
	VIII	
	IX	
	Totals	
С	The number of full-time equivalent junior high school teachers in your school September 30, 1970 was	as of
D	The number of minutes per week of counselling time provided by your school fo junior high school grades this year is	r the
E	The number of minutes of INSTRUCTION offered daily in your school during this year is: (exclude time for registration, recesses or class changes)	school
F	In which of the following areas has your school either formally or informally designated department heads for junior high instruction? (Check the appropri	ate items).
	Mathematics Fine Arts	
	Science None designated	
	Language Arts Others (specify)	_
	Physical Education	
	and Health	
	Industrial Arts and Home Economics	_
II.	PROGRAM INFORMATION	
A	A. Do you schedule study periods in half, or more, of your classes in a particul grade? (Check Yes or No). If yes, how many minutes per week are devoted to periods for those classes that have them?	ar study
	Grade Seven NO YES min. per wk.	
	Grade Eight NO Yes min. per wk.	
	Grade Nine NO YES min. per wk.	
В	3. The greatest number of electives studied by a student in each of following grades in your school is	the
	Grade 7 Grade 8 Grade 9	
С	The least number of electives studied by a student in each of the grades in your school is	following
	Grade 7 Grade 8 Grade 9	
D). The number of minutes per week that a student in each of the foll grades in your school spends in the study of electives is	owing
	Grade 7 Grade 8 Grade 9	



a. School facilities (design, sixe, etc.) b. Teacher qualifications c. Teacher interests d. Pupil interest e. Community expectations f. Others: specify F. Fill in the following blanks by providing the NUMBER of students enroller and the number of Minutes spent in the CORE subjects and ELECTIVE subject in Grades 7, 8, and 9 in your school. Please LIST your ELECTIVE subject in alphabetical order and in as general a fashion as possible. (e.g. Language Arts	Ε.		n of the program	of electives in	of influence they have n your school. (1) refer influence.
c. Teacher interests d. Pupil interest e. Community expectations f. Others: specify F. Fill in the following blanks by providing the NUMBER of students enroller and the number of Minutes spent in the CORE subjects and ELECTIVE subject in Grades 7, 8, and 9 in your school. Please LIST your ELECTIVE subject in alphabetical order and in as general a fashion as possible. (e.g. Language Arts Subjects Time Enrol. Time Enrol. Time Enrol. CORE SUBJECTS Language Arts Mathematics Physical Education Health Science Social Studies Guidance		a. School	facilities (des	ign, sixe, etc.	
d. Pupil interest e. Community expectations f. Others: specify F. Fill in the following blanks by providing the NUMBER of students enrolled and the number of Minutes spent in the CORE subjects and ELECTIVE subject in Grades 7, 8, and 9 in your school. Please LIST your ELECTIVE subject in alphabetical order and in as general a fashion as possible. (e.g. Language Arts 125 58) Subjects Grade 7 Grade 8 Grade 9 Time Enrol. Time Enrol. Time Enrol. CORE SUBJECTS Language Arts Enrol. Time Enrol. Health Science Social Studies Guidance		b. Teacher	r qualifications		
e. Community expectations f. Others: specify F. Fill in the following blanks by providing the NUMBER of students enroller and the number of Minutes spent in the CORE subjects and ELECTIVE subject in Grades 7, 8, and 9 in your school. Please LIST your ELECTIVE subject in alphabetical order and in as general a fashion as possible. (e.g. Language Arts		c. Teacher	r interests		
F. Fill in the following blanks by providing the NUMBER of students enrolled and the number of Minutes spent in the CORE subjects and ELECTIVE subject in Grades 7, 8, and 9 in your school. Please LIST your ELECTIVE subjects in alphabetical order and in as general a fashion as possible. (e.g. Language Arts 125 58) Subjects Grade 7 Grade 8 Grade 9 Time Enrol. Time Enrol. Time Enrol. CORE SUBJECTS Language Arts Mathematics Physical Education Health Science Social Studies Guidance		d. Pupil :	interest		
F. Fill in the following blanks by providing the NUMBER of students enrolled and the number of Minutes spent in the CORE subjects and ELECTIVE subjects in Grades 7, 8, and 9 in your school. Please LIST your ELECTIVE subjects in alphabetical order and in as general a fashion as possible. (e.g. Language Arts 125 58) Subjects Grade 7 Grade 8 Grade 9 Time Enrol. Time Enrol. Time Enrol. CORE SUBJECTS Language Arts Mathematics Physical Education Health Science Social Studies Guidance		e. Commun	ity expectations		
and the number of Minutes spent in the CORE subjects and ELECTIVE subjects in Grades 7, 8, and 9 in your school. Please LIST your ELECTIVE subjects in alphabetical order and in as general a fashion as possible. (e.g. Language Arts		f. Others	: specify		
and the number of Minutes spent in the CORE subjects and ELECTIVE subjects in Grades 7, 8, and 9 in your school. Please LIST your ELECTIVE subjects in alphabetical order and in as general a fashion as possible. (e.g. Language Arts					
Subjects Grade 7 Grade 8 Grade 9 Time Enrol. Time Enrol. CORE SUBJECTS Language Arts Mathematics Physical Education Health Science Social Studies Guidance	F.	and the number of M in Grades 7, 8, and	inutes spent in 9 in your school	the CORE subject. Please LIST	ts and ELECTIVE subjects your ELECTIVE subjects
Time Enrol. Time Enrol. Time Enrol. CORE SUBJECTS Language Arts Mathematics Physical Education Health Science Social Studies Guidance		(e.g. Languag	e Arts	125 58)	
CORE SUBJECTS Language Arts Mathematics Physical Education Health Science Social Studies Guidance		Subjects	Grade 7	Grade 8	Grade 9
Language Arts Mathematics Physical Education Health Science Social Studies Guidance		CODE CUDIECTO	Time Enrol.	Time Enrol.	Time Enrol.
Physical Education Health Science Social Studies Guidance					
Health Science Social Studies Guidance		Mathematics			
Science Social Studies Guidance		Physical Education			
Social Studies Guidance		Health			
Guidance		Science			
		Social Studies			
ELECT IVE SUBJECTS		Guidance			
	ELE	CT IVE SUBJECTS			
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GOVERNMENT OF THE PROVINCE OF ALBERTA DEPARTMENT OF EDUCATION

REFER TO FILE NO.

ADMINISTRATION BUILDING 10820 - 98 AVENUE EDMONTON , ALBERTA AREA CODE 403

AREA CODE 403 TELEPHONE: 229-3262

22 February, 1971

To: Junior High School Principals

This is to indicate that I have discussed with Mr. Barnett and Mr. Sawatzky their survey of junior high school options. It is my judgment that the information will be of substantial use to the Secondary School Curriculum Board in evaluating this concept. I would urge your cooperation with these investigators.

Yours very truly,



FACULTY OF EDUCATION DEPARTMENT OF EDUCATIONAL ADMINISTRATION



THE UNIVERSITY OF ALBERTA EDMONTON 7. CANADA February 25. 1971

We are writing to ask your cooperation in the completion of the enclosed questionnaire which deals with the junior high school program. The questionnaire is being distributed to three hundred Alberta principals in order to study practices as they actually exist in the schools.

This study is being undertaken in partial fulfillment of the requirements for the degree of Master of Education in Educational Administration. The research is being conducted with the approval of the Department of Educational Administration and Dr. J. Hrabi, Director of Curriculum for the Department of Education.

Anonymity of response is assured. We are concerned with specific schools only in so far as they fit into the total scheme and no schools will be mentioned except as part of the entire sample. The numbers on the front page of the questionnaire are merely used for the purpose of facilitating the collection of data.

We feel that the information obtained will be significant in the areas of both core and elective practices. After completion of our studies, a summary of the results will be sent to all participating schools.

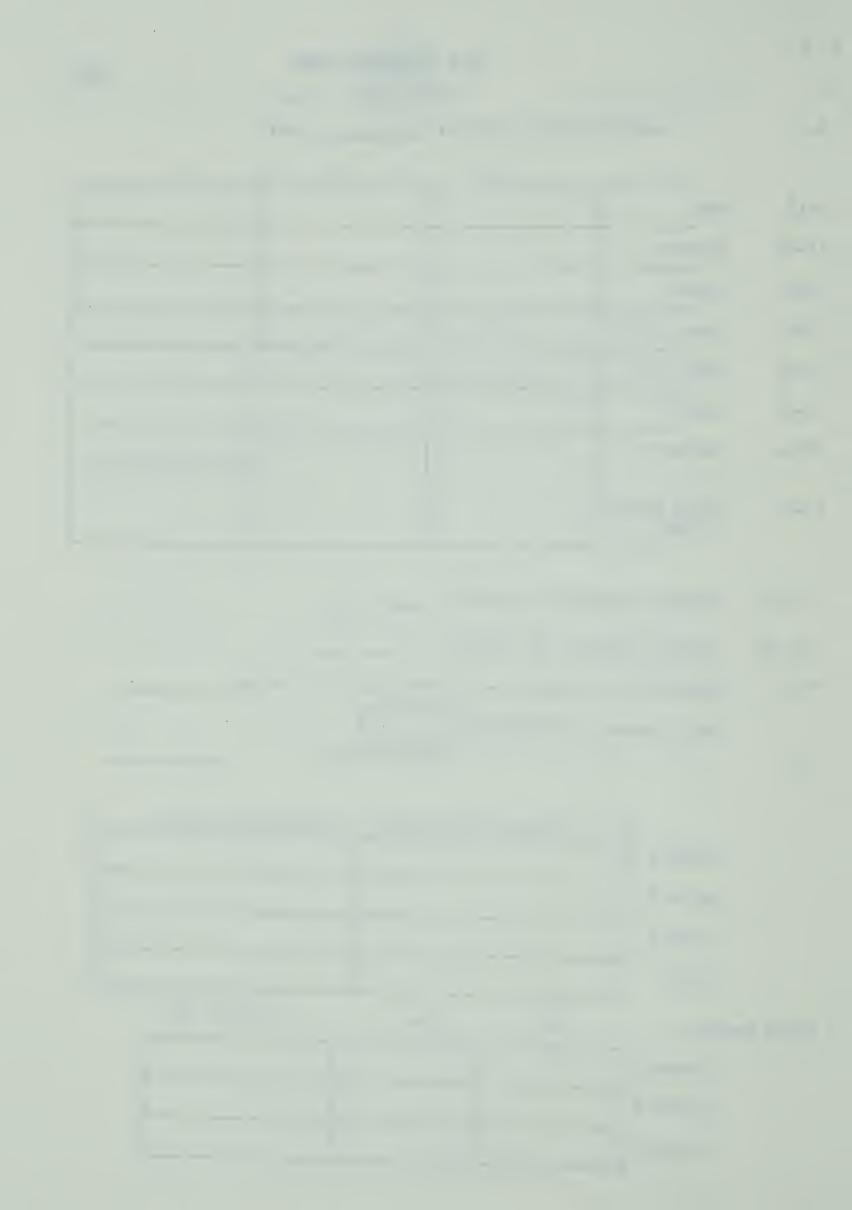
Thank you for giving your consideration and time to the enclosed questionnaire and mailing it to us at your earliest convenience.

Yours sincerely,

D. Barnett, W. Sawatzky Graduate Students

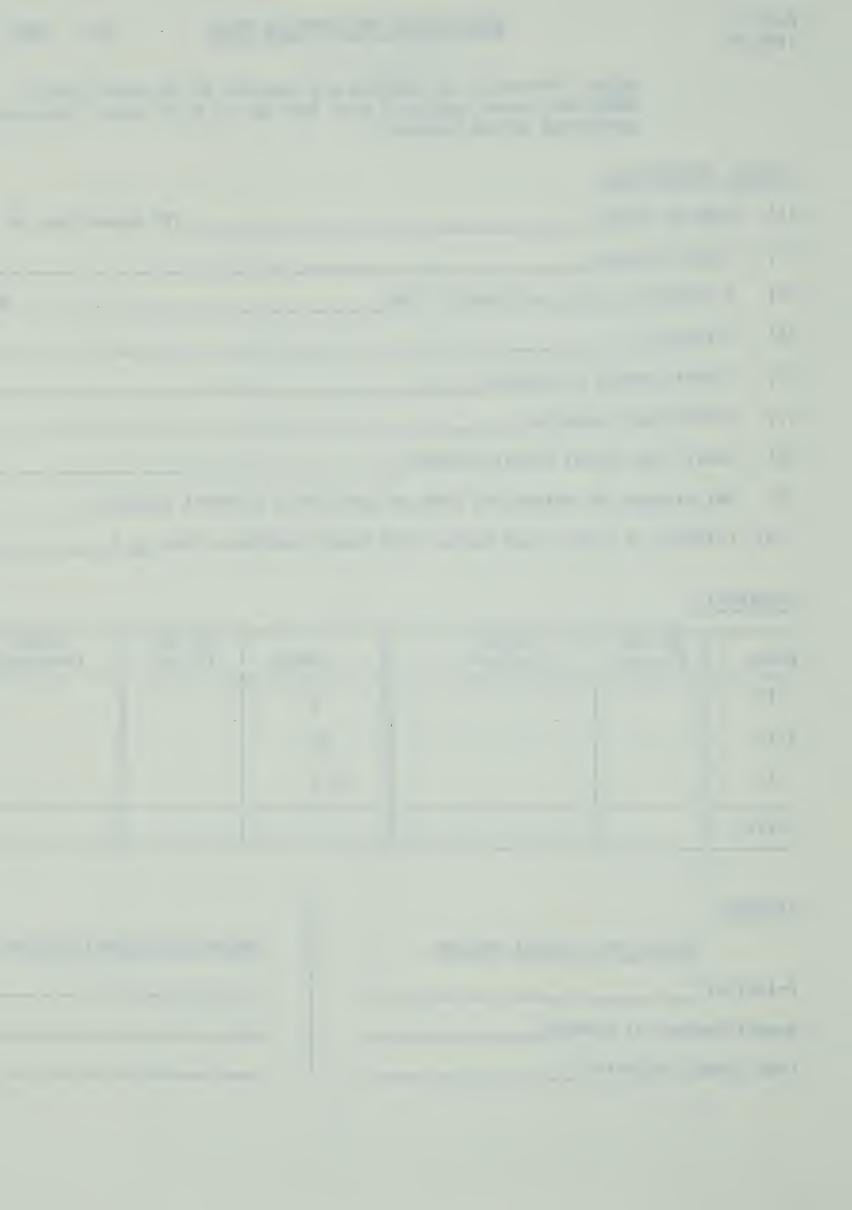


c. c.		Ι	ATA TABULAT	TION FORM	•	113
1.			School Ty	/pe		44,
2-4	Length	of School Da	y is	min.		
	and the same of th	7		8	9	
5-13	Math					
14-22	Science					
23-31	Social					
32-40	Lang. Arts					
41-49	Phys. Ed.					
50-58	Health					
59-61	Guidance .					
62-70	Total Option Time					
71-73	Average Time	per 'A' opt:	ion			
74-76	Average Time	per 'B' opt	ion		,	
77-79	Questionnaire	Number —			•	
30	Total Number	of Students	Size ca	tegory		
		Number o	f Classes	Number of	Students	
	Grade 7	-				
•	Grade 8					
	Grade 9	~				
•	Total					
Study Pe	+	NO	Yes	Min	per Wk.	
	Grade 7					
	Grade 3					
	Grade 9					



Note: Principals of Schools and Teachers of one-room schools must send three copies of this form to the High School Inspector concerned before October 1.

GENER	AL]	NFORMATION				
(1)	Nan	ne of School			(2) Scl	hool Code No
(3)						
(4)	s.	District, D	Div., or County. Na	me		No.
(5)						
(6)			of Schools_			
(7)			spector_			
(8)			ool Credits offered			
(9)			Instruction time p			
(10)	Cat	egory of Sc	hool (see Senior Hi	gh School Handbo	ok, Page 12	
ENROLI	MENT					
Grade		No. of Classes	Total Enrolment	Grade	No. of Classes	Total Enrolment
VII				X		
VIII				XI		
IX				XiI		
Total	S					
APPRO\	/AL					
		Junior High	h School Program	Sei	nior High Sch	ool Program
Princ	ipal					
Super	inte	ndent of Sci	hools			
High S	Scho	ol Inspector	r			



Form A 1970-71

HIGH SCHOOL REGISTRATION FORM

Page 2

JUNIOR HIGH SCHOOL PROGRAM

	9	Grade V		9	Grade V		-	Grade	XI	
Subject	ime	Enrol	Teacher No.	*Time	Enrol	Teacher No.	*Time	Enrol	Teacher No.	
CORE SUBJECTS Language Arts			-							
Mathematics										
Physical Education										
Health										
Science										
Social Studies										
Guidance										
GROUP A OPTIONS (list in alphabetical order)										
										1
GROUP B OPTIONS (list										
										117
										•
		_								





EDMONTON PUBLIC SCHOOLS

10010-107A Avenue., EDMONTON 17. ALBERTA.
Telephone: 403 - 429-5621

Board of Trustees

Mr. R. V. Johnson, Chairman Mr. J. D. Bracco Mrs. Loiz N. Campbell Dr. M. E. LaZerte Mrs. Edith Rogers Dr. W. E. Smith Mr. Jackson N. Willis Administrative Staff

Or Rolland W. Jones, Superintendent
Mr. T. D. Baker, Deputy Superintendent
Mr. T. W. Meen, Secretary-Treasurer
Mr. J. H. Finlay
Associate Superintendent
Dr. A. E. Hohol
Associate Superintendent

118.

February 22, 1971

Dr. L. D. Stewart,
Executive Secretary,
Cooperative Activities Program,
Faculty of Education,
University of Alberta,
EDMONTON 7, Alberta.

Dear Dr. Stewart:

RE: Research Request Mr. W. Sawatzky and Mr. D. Barnett

This project has been approved on the usual permissive basis as per the attached memorandum to our Junior High School Principals. A list of the schools is attached for the information of Messrs. Sawatzky and Barnett. They will be responsible for getting a copy of their questionnaire to each of the principals mentioned.

EAM/ab

c.c. Dr. C. Bumbarger
W. Sawatzky
D. Barnett
Dr. N. Marchak



EDMONTON PUBLIC SCHOOL BOARD Research, Development & Information

Date:

February 22, 1971

MEMORANDUM:

To:

Junior High School Principals

From:

E. A: Mansfield, Director - Educational Research

Subject:

RESEARCH REQUEST: MESSRS. SAWATZKY AND BARNETT

This project has been approved following analysis in our office by the Director of Educational Research and the Supervisor of Educational Data Processing. In addition, the proposed questionnaire was critiqued by a panel of Junior High School Principals. The revised questionnaire resulting from this critique is attached for your information. It is possible, however that the final questionnaire which you will receive from Messrs. Sawatzky and Barnett could have a few additional modifications. Therefore the attached questionnaire should not necessarily be regarded as the final one.

In the near future you'll be receiving from Messrs. Sawatzky and Barnett a copy of their final draft questionnaire along with a self addressed stamped envelope to facilitate your returning it to them by mail.

Both Mr. Sawatzky and Mr. Barnett are Junior High School teachers from our system on leave of absence to pursue their M.Ed. degrees. Their project, which is being carried out across the Province, has been approved on the basis that it has potential for returning useful information to our school system and to those Junior High Schools participating in the study.



EDMONTON PUBLIC SCHOOL BOARD

Research, Development & Information

Date:

February 10, 1971

MEMORANDUM:

To:

B. Baker

V. Nakonechny

D. Thomas

D. Marion

C. Young

D. Assheron-Smith

F. Loewen

B. Thompson

C. Climenhaga

B. Barabash

K. Molyneux

V. Sulatycky

From:

E. A. Mansfield

Subject:

RESEARCH REQUEST - JUNIOR HIGH SCHEDULING:

Messrs. W. Sawatzky and D. Barnett

c.c.

J. Reid

W. Sawatzky

D. Barnett

Dr. C. Bumbarger

Dr. L. D. Stewart

J. Yusep

W. Frey

A. Nichols

A. Walker

- 1. Attached please find for your information a research request form and proposed questionnaire from Messrs. Sawatzky and Barnett pertaining to their requested research study. Both these gentlemen are junior high teachers from our system on leave of absence to obtain M.Ed. degrees.
- 2. Following receipt of this information from the University I discussed the matter with Mr. J. Yusep, Supervisor -Educational Data Processing, Dr. C. Bumbarger, the graduate students' Advisor and Mr. B. Baker, Chairman of the Committee examining a Computerized Junior High Report Form.
- There was a general concensus from this discussion that the following procedure would prove advantageous both to the graduate students and to our school system:
 - a) That the Junior High principals constituting the reporting committee examine the details



of the proposed questionnaire, etc. to discern those revisions, deletions, or additions which would subsequently result in information useful to the principals being generated by the study.

- b) That these principals bring the "critiqued" questionnaires with them to the Committee meeting scheduled for the Superintendent's Conference Room at 1:30 p.m., February 18, 1971 (as set out in the memorandum of February 3rd from B. Baker).
- c) That the two graduate students be in attendance at the meeting so that following completion of the regular agenda the principals can give their reactions and recommendations to Mr. Sawatzky and Mr. Barnett.
- d) Subsequently Messrs. Sawatzky and Barnett can revise, if necessary, their questionnaire prior to the study proceeding further in order to ensure that the information generated will be of value to practitioners in the field.

Of course, principal participation in this critique session will be on an optional basis. However, your cooperation is solicited in view of the fact that the proposed studies do have the potential for providing us with needed information. While both Mr. Yusep and I are of the opinion that the proposed questionnaire needs work, we are also of the opinion that recommendations for change can best be made by those working most intimately with the core and elective programs.



APPENDIX B

Correspondence with Provincial Governments



FACULTY OF EDUCATION

DEPARTMENT OF EDUCATIONAL

ADMINISTRATION



123.
THE UNIVERSITY OF ALBERTA
EDMONTON 7. CANADA
March 1, 1971

Dear Sirs,

I am currently enrolled in a Masters program in Educational Administration at the University of Alberta. As partial fulfillment of the requirements of this program I am writing a thesis on 'Time Allocation Practices in the Alberta Junior High Schools'. In connection with this research I am also interested in how the Alberta requirements compare with those of the other provinces. For this reason I would like to find out:

(a) What courses are compulsory in the junior high school grades (Grades 7,8 and 9) in your province.

(b) What courses can be taken on an elective basis.

and (c) What are the suggested weekly time allocations, if any, for each of these compulsory and elective courses.

I would appreciate receiving this information at your earliest convenience. Thank you.

Yours sincerely,

Donald R. Barnett





GOUVERNEMENT DU QUÉBEC

MINISTÈRE DE L'ÉDUCATION

IRECTION GÉNÉRALE DE L'ENSEIGNEMENT ÉLÉMENTAIRE ET SECONDAIRE

HÔTEL DU GOUVERNEMENT QUÉBEC Québec, le 29 mars 1971.

Monsieur Donald R. Barnett Faculty of Education Department of Educational Administration University of Alberta Edmonton 7.

Monsieur,

Je vous fais parvenir la grille-module des périodes obligatoires à l'école secondaire de langue française comme de langue anglaise qui a cours actuellement dans la province de Québec.

Je vous fais remarquer qu'une nouvelle grillemodule beaucoup plus souple sera présentée en janvier 72 et mise à l'essai graduellement.

Dans l'espoir que ces renseignements pourront vous être utiles, je vous prie d'accepter mes meilleurs sentiments.

Le directeur du service des Programmes





DEPARTMENT OF EDUCATION VICTORIA, BRITISH COLUMBIA

March 9, 1971

Mr. Donald R. Barnett,
Faculty of Education,
Dept. of Educational
Administration,
The University of Alberta
Edmonton 7, Alberta

Dear Mr. Barnett:

Your letter of March 1, 1971 has been referred to me for reply.

I am forwarding to you a booklet that contains the information you request for grade VIII and IX - the Administrative Bulletin for Secondary Schools (1967), pages 18 and 19.

As Grade VII is included in the intermediate grades of the elementary school, I enclose two pages extracted from the revised Elementary Administrative Handbook which will provide you with the suggested time allotments for this grade under the Intermediate column of the table of page 24.

You will note also, that the programmes fro Grade VII and VIII are relatively constant and provide little opportunity for electives, whereas in Grade IX elective subjects become available.

I trust this information will be sufficient for your purposes.

Yours sincerely,



A. General

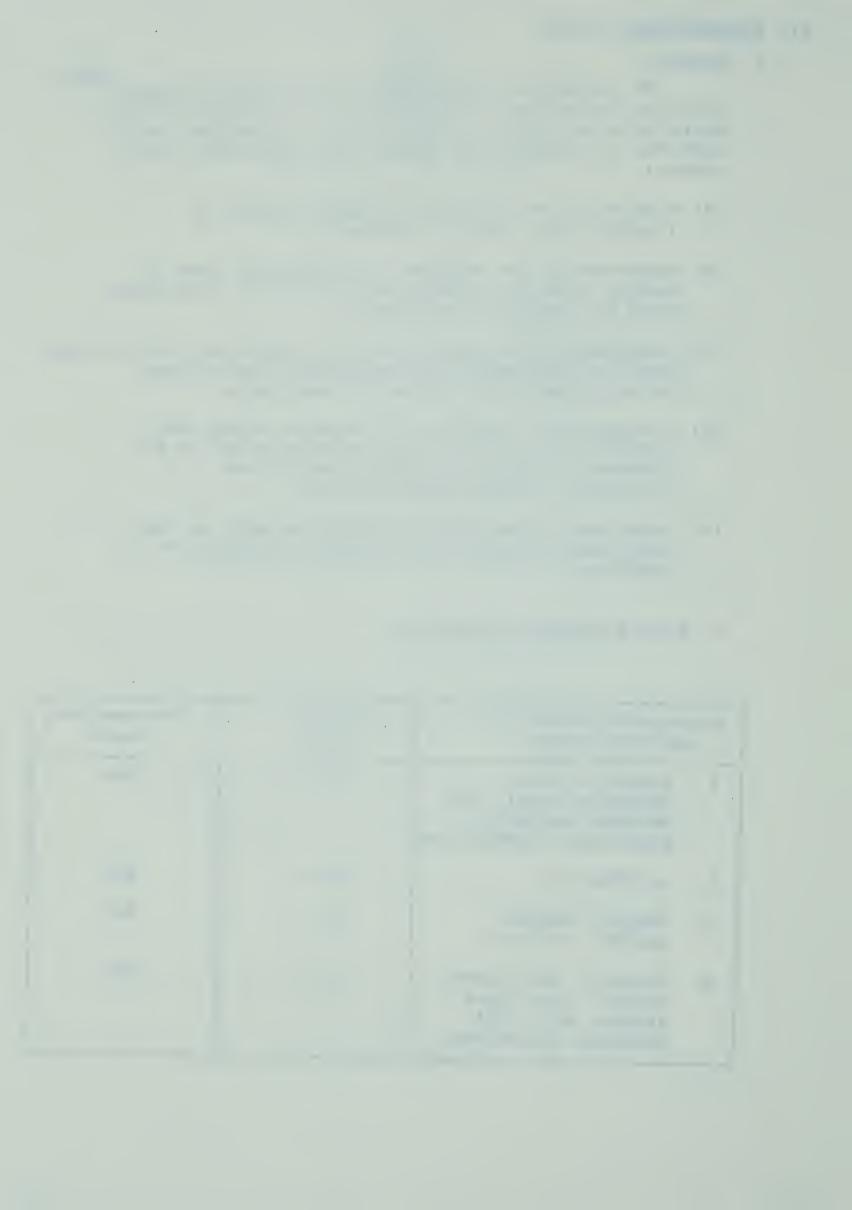
126.

It should be noted that the following schedule provides guidelines in order that all subjects of the curriculum be taught to each class. Notwithstanding specific differences in detail, all timetables must ensure:

- (a) A priority of emphasis on basic skills in language arts and in arithmetic.
- (b) Opportunity for varying instructional time in social studies, science and health in accordance with the needs of the pupils.
- (c) Opportunity for varying but not omitting instructional time for cultural and recreational activities in accordance with resources available.
- (d) A reasonable variation or balance within the schedule of teaching and learning to allow for different kinds of learning activities throughout the day and the week.
- (e) Opportunity for group teaching as well as for individual teaching and remedial instruction as required.

B. Time Allotment Guidelines

		and the second s	
	riculum Subjects nd Activities	Primary Years	Intermediate Years
1.	Language Arts (Reading, Oral, and Written Language, Spelling, Handwriting)	70 0	500
2,	Arithmetic	150	200
3.	Social Studies, Health, Science	150	300
4.	Cultural and Recreational Activities (Music, Art, and Physical Education)	350	400



- 1. The recommended schedule for the distribution of instructional time is intended to serve as a guide. It is the responsibility of teachers and principals to interpret and implement this schedule for each class. No timetable should be so rigid that it cannot be altered as the need arises. On the other hand, timetables in general should function to give direction to the educational programme for the class. To assist in this and in the general administration of the school it is recommended that the schedule for each class be prepared in written form for reasonably large blocks of time.
- 2. The sole purpose in providing for flexibility in the distribution of instructional time is to facilitate differentiation of curriculum and teaching in terms of the needs of pupils.
- 3. For clarity in presentation the schedule has been expressed in terms of minutes per week. The following may be taken into account in interpreting and implementing the intent of this schedule:
 - (a) Departmentalization may be considered desirable in effecting maximum use of staff talents.
 - (b) Different timetables may be organized for different periods of the year; e.g., it may be wise to vary the length of physical education periods in accordance with the weather and facilities available.
 - (c) Combinations of grades or classes may make it advisable to modify the specific time for particular subjects.





128.
(Miss) J. HARROW
ASSISTANT DIRECTOR
(Elementary)
K. H. CHARLESWORTH
ASSISTANT DIRECTOR
(Secondary)

DEPARTMENT OF YOUTH & EDUCATION

CURRICULUM BRANCH

1181 PORTAGE AVENUE - ROOM 411 WINNIPEG 10

March 17, 1971.

Mr. Donald R. Barnett,
Department of Educational Administration,
Faculty of Education,
The University of Alberta,
Edmonton 7, Alberta.

Dear Mr. Barnett:

I am attaching a copy of the Basic Outline for Grades 7 - 9 in Manitoba. You will note, that although the outline was drawn up in 1967, the time allotments and subject requirements are still basically the same.

I hope this information will be of help to you in your studies.

DB/bro.

Att'd.





S A.I BULLOCK
DIRECTOR OF CURRICULA

DEPARTMENT OF EDUCATION

CURRICULUM BRANCH

1181 PORTAGE AVENUE - ROOM 411
WINNIPEG 10

MEMORANDUM TO PRINCIPALS:

Subject: Basic Outline: Grades 7 - 9

- 1. The attached sheet summarizes the basic outline and recommended time allotments for the revised programs in Grades 7 9.
- 2. The attention of principals is drawn specifically to the following:
 - (a) Time allotment for Literature is now included under English (not the Arts).
 - (b) Time allotment for Second Language, where it is taught, has been included as a separate item (not under Language).
 - (c) The 16% time allotment for the Practical and Fine Arts has been allotted in a block to permit as much flexibility to schools as possible.
 - (d) No separate time allotment has been given to Library. ("An adequate use of library facilities is one of the most important adjuncts to the interpretation and development of the curriculum, the library and the classroom being so closely integrated that it is difficult to conceive of one operating without the other. Every teacher in every subject should devote part of the pupil's time to library work." Elementary Curriculum Seminar, 1964.)
 - (e) In regards to Grade 9 in 1967-68, the existing basic outline will continue unchanged (See Junior High Grades: Introduction and Social Studies, pp. 4-6) except for time allotments recommended for recently revised subject areas. The Grade 9 outline (recommended by the Elementary Curriculum Seminar) attached is included here to provide information regarding these latter time allotments only. Also see Note on Grade 9 attached.
- 3. It should be noted that the total basic pattern for the junior high grades (7-9) will likely come under review during 1967-68.



GRADES 7 - 9: BASIC OUTLINE

Grades 7 & 8		+ Grade 9		130.
English Mathematics Social Studies General Science Physical Education Health & Guidance Practical and Fine Arts *Second Language Unassigned	25% 12% 12% 12% 6% 5% 16% 8% 4%	German, Ul	of two of: French, krainian, Art, Music, Economics.	

NOTES: GRADES 7 & 8

- 1. Time allotments are intended as a guide, not a prescription. See Note 3, page 17, April Curriculum Bulletin. They do represent, however, the time allotments that have guided curriculum committees in the preparation of revised programs.
- 2. Since by September 1967 program revision in Grades 7 and 8 will be largely complete, the basic outline above should act as a guide in school time-tabling. Although different in format, the outline does not differ substantially from its predecessor (See page 4 Junior High Grades, General Introduction and Social Studies).
- *3. Although a second language is optional, it is included as part of the total time allotment since a majority of students do in actual fact study a second language at these levels.
- 4. A block of time of 16% has been allotted to the Practical (Industrial Arts and Home Economics) and Fine Arts (Music, Art and Crafts) in each of Grades 7 and 8. Ideally, all these areas should be available to students during their studies in Grades 7 9; as a minimum, the Elementary Curriculum Seminar recommended that schools should seek to offer two of Art, Music, the Practical Arts. The 16% time block may be sub-divided according to local requirements (e.g. on the basis of 2 periods or 4 periods per week); revised programs in all these areas are being developed with these alternative patterns in mind. It should be noted that a minimum course in any of these areas is still considered to be one that provides, during the 3 years of Grades 7 9, the equivalent of 4 periods per week (or 120 minutes of instructional time) throughout one year, dependant upon the length of the period. Note also that Literature has now been included as part of the Language Arts program and that no separate time allotment has been given to Library.
- 7 9 programs, published in <u>Junior High Grades</u>, <u>Introduction and Social Studies</u>, pending further consideration of these areas during 1967-68. General administrative information in this publication will therefore continue in effect, subject to the modifications outlined as above.
- + NOTE: Grade 9
 The Grade 9 basic outline is only applicable in 1967-68 insofar as it relates to recommended time allotments for subject areas already revised or to be revised next September. In the case of Art (rev. 1967) and Home Economics (rev. 1966), some time-table adjustments will be required during the period of transition. Also see note 5 preceding.



DEPARTMENT OF EDUCATION

PROGRAM DEVELOPMENT — GENERAL EDUCATION BRANCH
AVORD TOWER, REGINA

MP/hi Encl.

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March 4, 1971.

Dear Mr. Barnett,

Enclosed is a page from our Division III Curriculum Guide which indicates the courses offered and the suggested time allotments.

All courses in the Division III Guide are meant to be compulsory in so far as school facilities and availability of qualified teachers are concerned. In other words there are no electives and students are expected to take the full program offered in the school. Except ion to the above is that of Home Economics and Industrial Arts which are programs designed essentially for girls and boys.

Sincerely,



SUGGESTED TIME ALLOTMENTS

The following is a chart of subject offerings and suggested time allotments in minutes per week.

Subject	VII		VIII	IX
English	360		300	300
Social Studies	160		160	160
Mathematics	200		180	180
Science	160		160	160
Health & Physical Education	160		160	160
Guidance	40		40	40
A Second Language	120		120	120
Fine Arts — Art —	120		100	100
— Music —	120		100	100
Home Economics)		
)	160	160
Industrial Arts)		
	1440		1480	1480

NOTE: For scheduling convenience the 40 multiple was used as the basis of time allocation. This should not be interpreted to mean that all schools must have 8 periods of 40 minutes each. Modules of 20 minutes could be used; double periods of 80 minutes could be scheduled for industrial arts and home economics.

It is intended that the schedule should be kept flexible. The suggested time allotments are an approximation of the amount of weekly time required for each subject. How time is distributed within the suggested minimums is left to the principal and staff of individual schools to decide.





GOVERNMENT OF NEWFOUNDLAND AND LABRADOR

DEPARTMENT OF EDUCATION

ST. JOHN'S March 8, 1971

Mr. Donald R. Barnett Graduate Student Faculty of Education The University of Alberta Edmonton 7, Alberta

Dear Mr. Barnett:

In reply to your letter of March 1, the following are the answers to your questions:

(a) Compulsory subjects in Grades 7, 8 and 9

English
Mathematics
History
Geography
Civics
General Science
Health and Physical Education
Religious Education

(b) Electives

Art
Industrial Arts
Music
French
German
Latin
Spanish
Home Economics
Educational Drama

(c) We have discontinued suggested time allocations as of 1969 - 70.

Trust this information will be of some help to you in your research.



(a) What courses are compulsory in the junior high school Grades (7, 8, 9) in P. E. I?

	Grade 7	Grade 8	Grade 9
Comp.	English	English	English
	Maths.	Maths.	Maths.
	Science	Science	Science
	Geography	Geography	Geography
	History	History	History
•	Health	Health	Health
(b)			
lectives	Music	Music	Music
	Phys Ed.	Phys. Ed.	Phys. Ed.
	Art	Art	Art
	Home Ec.	Home Ec.	Home Ec.
	French	French	French

(c) Schools decide how best to allocate time in relation to program authorized by this Department.

Curriculum Branch
Department of Education
Charlottetown, P. E. L

March 31, 1971









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